DOCTOR OF CLINICAL PSYCHOLOGY (DCLINPSY)

Doctorate in Clinical Psychology: Main Research Portfolio

1) Self-efficacy as a mediator in cognitive behavioral therapy for depression: a systematic review; 2) Transition to adulthood: evaluating a pilot implementation of multimedia person-centred plans for individuals with learning disabilities; 3) Investigating associations between exposure to pornography and harmful sexual behaviour in young people

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Abstracts

Critical Review of the Literature (CRL)

Self-Efficacy as a Mediator in Cognitive Behavioural Therapy for Depression: A Systematic Review

CBT is one of the foremost treatments of depression, yet response rates are variable. In order to enhance treatment efficacy, it is important to understand the mechanisms of change, which begins with identifying mediators in the change process. Stemming from social learning theory, self-efficacy is one concept that has been proposed as a mediator of treatment for depression. A systematic review of the literature was undertaken to examine the role of self-efficacy as a mediator in CBT for depression. Databases yielded 701 initial search results, of which 13 met criteria for inclusion. The included studies adopted a range of methodologies, and included treatment of clinical samples and preventative intervention for non-clinical/subthreshold samples. Studies were evaluated against eight criteria for mediation, with all studies providing evidence to explore the first criteria (whether self-efficacy improves as a result of CBT for depression), and five studies providing evidence for the second (whether improvements in self-efficacy are associated with improvements in depression). Overall, there was insufficient evidence to establish self-efficacy as a mediator, and multiple other cognitive and behavioural variables also demonstrated significant relationships with treatment outcomes. Implications for theory, practice and future research are considered.

Service Improvement Project (SIP)

Transition to Adulthood: Evaluating a Pilot Implementation of Multimedia Person-Centred Plans for Individuals with Learning Disabilities

People with learning disabilities (PWLD) typically experience numerous transitions throughout their lives: both developmental transitions from one stage of life to the next (e.g. childhood to adulthood); and physical transitions across residential, educational, healthcare, and social care services. Multiple transitions increase the likelihood that elements of an individual's story may get 'lost' along the way, indicating a need for tools that can capture their stories and travel with them across transitions. Such tools might include person-centred care plans, which in recent years have moved into the multimedia arena (multimedia person-centred plans; MPCPs). The current service improvement project evaluated the early stages of pilot implementation of MPCPs within specialist schools for PWLD in Bristol, focusing on those leaving school. Qualitative feedback was sought from a number of stakeholder groups in order to generate recommendations as to how the implementation of MPCPs could be improved, in particular ensuring their sustained use across time and transitions. Feedback indicates that MPCPs are considered to hold great potential for furthering a person-centred approach, consistency across services, and the holding of an individual's story across transitions. However, several practical considerations must be addressed and the ethos and awareness of MPCPs more widely known in order to ensure the longevity of such tools.

Main Research Project (MRP)

Investigating Associations between Exposure to Pornography and Harmful Sexual Behaviour in Young People

Children in the UK are spending increasing amounts of time online through various means, many using their own internet devices. This makes parental monitoring of online activity challenging and increases likelihood of exposure to online risks, including pornography. Previous research indicates an association between viewing pornography (particularly aggressive pornography; AP) and harmful sexual behaviour (HSB). The current study was unique in exploring the potential role of sexually-relevant emotional, cognitive (sexual attitudes), behavioural (objectification, addictiveness) and physiological (sexual arousal) variables as mediators in this relationship. We found no direct relationship between overall pornography use and HSB, but a direct relationship between viewing AP and HSB. Sexual arousal, sexual attitudes, sexual objectification and pornography addictiveness were found to mediate these relationships, although emotional responses did not. We consider findings in the context of an overarching model of the impact of media use on individual outcomes, discuss the implications for clinical practice, and highlight educational needs for young people that extend beyond exposure to pornography and online risks to encapsulate behavioural and attitudinal effects.

Critical Review of the Literature:

Self-Efficacy as a Mediator in Cognitive Behavioural Therapy for Depression: A Systematic Review

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Introduction

Depression and Cognitive Behavioural Therapy

Depression is the most predominant mental health problem worldwide and the second biggest cause of years lived with disability, after low back pain (Global Burden of Disease Study 2013 Collaborators, 2015). In England, the recorded prevalence rate for depression amongst adults in 2014-2015 was 7.3%, while 13,249 hospital admissions cited depressive episodes as the primary diagnosis in 2013-2014 (Health and Social Care Information Centre, 2015). Although individuals may experience a single episode of depression, for many it is a lifelong disorder of multiple episodes (Fava & Kendler, 2000). The average age of onset is mid-20s (NICE, 2009) but first episodes can occur at any time, with 2% of 5-16 year olds meeting diagnostic criteria (Independent Mental Health Taskforce to the NHS in England, 2016), although prevalence increases with age (Costello, Copeland, & Angold, 2011).

One of the key approaches to understanding depression is Beck's (1976) cognitive theory, with Cognitive Behavioural Therapy (CBT; Beck, 1979) established as one of the primary, NICE-recommended (2009) treatments for depression. A vast body of research has demonstrated the effectiveness of CBT in treating clinical and subclinical depression (Butler, Chapman, Forman, & Beck, 2006; Cuijpers, 2008; Cuijpers, Smit, & Van Straten, 2007; DeRubeis et al., 2005; Dobson, 1989; Rush, Beck, Kovacs, & Hollon, 1977; Simons, Murphy, Levine, & Wetzel, 1986; Wiles et al., 2013). However, individuals vary in their response to treatment, with many responding only partially if at all (Button et al., 2015); some relapsing (Simons et al., 1986); and treatment response rates varying across studies (e.g, ranging 35-80% across: Dimidjian et al., 2006; Rush et al., 1977; Wiles et al., 2014).

To enhance the effectiveness of psychological interventions, in this case CBT for depression, it is important to understand the mechanisms (events) by which they facilitate change (Kazdin, 2007). Once understood, this may help to identify those likely to respond favourably to intervention, and enables relevant treatment components to be prioritised and enhanced to improve the rate of response (Button et al., 2015; Fentz, Arendt, Toole, Hoffart, & Hougaard, 2014). This also provides the opportunity for treatment to be tailored for non-responders, perhaps by emphasising the development of prerequisite skills to facilitate change mechanisms. The first step towards understanding mechanisms of change is to

identify mediators in the change process (Kazdin, 2007), i.e. variables that account for the relationship between CBT intervention and the change in symptoms of depression.

Self-Efficacy and Social Learning Theory

One concept that has been hypothesised as having a mediational role in psychological intervention is self-efficacy (Bandura, 1977). Self-efficacy is defined as an individual's belief in their ability to achieve desirable outcomes or manage prospective situations (Bandura, 1982, 1997), and is distinct from actual or perceived skill, predictions or intentions for behaviour, outcome expectancies, and causal attributions for events (Maddux, 2002). Self-efficacy can be considered a key mechanism of personal agency: according to social learning theory (SLT), an individual's attempts to achieve desired outcomes (e.g. behaviours, thoughts, feelings, environmental factors) depends on whether they believe they have the capability to assert influence or control over such outcomes (Bandura, 1997). In this way, one's cognitive appraisals influence their actions (Bandura, 1982). SLT states that self-efficacy beliefs develop through (i) previous ability (or failure) to perform as required for attainment; (ii) vicarious learning through observation of similar others; (iii) imaginal experiences of in/effective behaviour in hypothetical situations; and (iv) social influence/verbal persuasion about one's capabilities. Self-efficacy beliefs are also influenced by physiological states, which contribute to judgements of strength, vulnerability and competence (Bandura, 1982, 1997; Maddux, 2002; Schwarzer, 1992).

Self-Efficacy and Depression

Self-efficacy beliefs play a significant role in psychological difficulties, with a feeling of loss of control common amongst those seeking psychological therapy (Maddux, 2002). SLT proposes that depressed individuals hold low self-efficacy expectancies, believing that they cannot achieve desired outcomes or perform as well as they would like, build meaningful relationships, or control depressive ruminations and employ helpful coping/self-regulation strategies (Bandura, 1997; Maddux, 2002; Maddux & Meier, 1995).

Research has demonstrated a significant negative relationship between self-efficacy and symptoms of depression in adolescence (Ehrenberg, 1991; Muris, Schmidt, Lambrichs, & Meesters, 2001; Tahmassian & Jalali Moghadam, 2011). While high self-efficacy may act as a protective factor against depression (McFarlane, Bellissimo, & Norman, 1995), even in the face of difficult life events (Maciejewski, Prigerson, & Mazure, 2000); low self-efficacy, among other factors, may mediate the relationship between life events and later

depressive symptoms (Asselmann, Wittchen, Lieb, Höfler, & Beesdo-Baum, 2016; Muris et al., 2001) particularly where there is a history of depression (Maciejewski et al., 2000).

Self-efficacy can lead to depression both directly and indirectly. Using mediational analysis, Bandura (1999) demonstrated that perceived inefficacy in social and academic areas in childhood can lead to depressive symptoms both directly and via poorer academic achievement, reduced prosocial functioning, and increased problem behaviours, which in turn increase depression. Similarly, in older adults self-efficacy beliefs about adjustment and social support are related to depressive symptoms at follow-up both directly and indirectly via impact on actual social support (Holahan & Holahan, 1987). Conversely, improvements in self-efficacy beliefs (e.g. regarding academic and social achievement and ability to resist negative influences) can predict reduction in symptoms of depression in young people, even after controlling for previous levels of symptoms (Scott & Dearing, 2012).

Self-Efficacy and Psychological Treatment

Bandura (1977) proposed that self-efficacy could explain and predict the behavioural change achieved through psychological intervention. Intervention helps an individual to gain or regain a sense of efficacy and control, by providing strategies and learning opportunities to enhance their skills through the means described above: performance, vicarious and imaginal experiences, and verbal persuasion (Maddux, 2002). According to Bandura, enhancing one's self-efficacy in turn determines whether they utilise coping behaviour, the effort they expend in doing so, and the persistence of such effort when faced with obstacles. If, as Maddux states, psychological intervention increases an individual's self-efficacy, one would expect to see increased efforts to utilise adaptive strategies in the face of emotional and cognitive difficulties, ultimately leading to improved mood.

There is growing literature demonstrating the role of self-efficacy in therapeutic interventions for psychological disorders. Self-efficacy has been shown to predict change in response to treatment for a number of conditions, with individuals with a higher level of baseline self-efficacy more likely to respond to treatment, and those with lower self-efficacy less likely to respond and more likely to relapse (Gopinath, Katon, Russo, & Ludman, 2007; Perraud, 2000; Simons, Lustman, Wetzel, & Murphy, 1985; Stiles-Shields, Corden, Kwasny, Schueller, & Mohr, 2015; Tonge et al., 2005; Williams, Kinney, & Falbo, 1989).

More recently, self-efficacy has been explored not only as a predictor of response to intervention, but as a mediator in the change process. Recent studies have shown the mediational role of self-efficacy for handling situations in treatment for school refusal (Maric, Heyne, Mackinnon, van Widenfelt, & Westenberg, 2013); the mediational role of self-efficacy for managing pain in CBT for persistent pain (Turner, Holtzman, & Mancl, 2007); and the role of cognitive reappraisal self-efficacy as a mediator in outcomes for CBT for social anxiety disorder (Goldin et al., 2012). Fentz et al. (2014) recently conducted a systematic review and meta-analysis evaluating the role of self-efficacy as a mediator of outcomes in CBT for panic disorder. 33 studies were evaluated against four criteria for establishing mediation, overall demonstrating some support for the role of panic self-efficacy as a mediator of treatment outcome. However, catastrophic beliefs played a relatively equal role. There is currently no such review regarding the role of self-efficacy in CBT for depression, which is the subject of the current paper.

Related Constructs

Before proceeding with the current review, we recognise that self-efficacy has been linked and at times conflated with multiple other constructs, such as self-esteem, perceived locus of control, learned helplessness, and coping (Bandura, 1984; Maddux, 2002; Strecher, DeVellis, Becker & Rosenstock, 1986). While some suggest that self-efficacy and related constructs may represent facets of a higher order construct or trait, there remains unique variance and important conceptual distinctions between concepts (Azjen, 2002; Judge, 2002; Strecher et al., 1986).

Self-efficacy refers to one's perceived ability to achieve specific outcomes in specific situations, while self-esteem represents an overall evaluation of one's worth (Fennell, 1997; Maddux, 2002). The two can be independent (as one may perceive themselves as efficacious in an area that is inconsequential to their self-worth), yet are often intertwined, as individuals pursue self-efficacy in activities central to their self-worth (Bandura, 1984).

Perceived locus of control is also distinct, representing whether an individual perceives outcome achievement as within their control or under the control of other forces e.g. environmental conditions; not whether one perceives themselves as capable of performing in a given way (Azjen, 2002; Bandura, 1977; Strecher et al., 1986).

Learned helplessness occurs when one ceases trying to achieve an outcome following repeated exposure to situations in which it is beyond their control, and may be personal ('I can't produce the required outcome') or universal ('no-one could control it') (Abramson, Seligman & Teasdale, 1978; Bandura, 1977). While it may encompass low self-efficacy, learned helplessness includes outcome expectancies that can be independent of the individual's perceived capabilities.

Similarly, coping is a broader process which encompasses self-efficacy. In coping, one evaluates the potential impact of a situation on well-being (primary appraisal) and their ability to manage the situation (secondary appraisal), before acting based on their resources and situational demands (Lazarus & Folkman, 1984; Matthieu & Ivanoff, 2006). During secondary appraisal, individuals consider not only whether they can apply strategies effectively, but which strategies are available the likelihood they will achieve the intended outcome (Matthieu & Ivanoff, 2006; Strecher et al., 1986).

Given the intertwining and sometimes overlapping nature of these constructs and self-efficacy, it is unsurprising that they too have demonstrated associations with depression. Low self-esteem may be a vulnerability factor for, consequence, or aspect of depression (Fennell, 1997); perceiving oneself as having little control over outcomes is associated with increased depression (Benassi, Sweeney & Dufour, 1988; Johnson & Sarason, 1977); holding maladaptive explanatory styles associated with learned helplessness is both associated with and predictive of depressive symptoms (Nolen-Hoeksema, Girgus & Seligman, 1986); and individuals with higher active coping demonstrate greater resilience to depression and fewer symptoms (Dumont & Provost, 1999; Herman-Stahl & Petersen, 1999; Mitchell, Cronkite & Moos, 1983). However, there is a paucity of research directly examining the role that these concepts play in treatment for depression. Meanwhile, research has explored the role of several other cognitive factors, demonstrating associations between therapeutic outcomes and cognitive content, dysfunctional attitudes and attributional style (DeRubeis et al., 1990; Driessen & Hollon, 2010; Whisman, 1993), highlighting attributional style as a mediator in CBT. However, causality and the necessity of cognitive change for therapeutic improvement are yet to be unambiguously proven, and the mediation effects found have been insufficient for full mediation thus may be of limited clinical significance (DeRubeis et al, 1990; Driessen & Hollon, 2010).

Aims of the Current Review

This paper seeks to conduct a systematic review of the literature, investigating the mediational role of self-efficacy in therapeutic intervention for depression. Specifically, this review explores whether change in self-efficacy mediates the change in symptoms of depression obtained through CBT for clinical and subclinical levels of depressive symptoms. The findings of this review will be used to consider the clinical implications for practice, namely optimizing the effectiveness of CBT for depression.

Determining Mediation

Several criteria must be satisfied in order to establish a psychological process as a mediator (Kazdin, 2007). There must be evidence of:

a) Strong association between the intervention (in this case CBT for depression) and proposed mediator (change in self-efficacy).

b) Association between the proposed mediator (change in self-efficacy) and the outcome (change in symptoms of depression).

c) Dose-response relationship, i.e. higher activation of the proposed mediator (self-efficacy) leads to greater change in the outcome (symptoms of depression).

d) Cause-effect relationship, as shown through direct experimental manipulation of the proposed mediator (change in self-efficacy) resulting in changes in the outcome (symptoms of depression).

e) Causal relation shown through temporal precedence, i.e. demonstrating that change in self-efficacy occurs *prior* to change in symptoms of depression.

f) Specificity in the associations between the intervention, mediator and outcome; i.e. change in depressive symptoms following CBT must be uniquely accounted for by changes in self-efficacy, rather than a multitude of other mediators.

g) Consistency of results, demonstrated by replication across studies, conditions and samples.

h) Plausible/coherent explanation as to how a mediator operates to produce an outcome, which must be integrated with broader evidence and theory.

Individual studies vary in which of the above criterion they address; and no single study can address all criterion, given that replication is needed to demonstrate consistency (Kazdin, 2007). Within this review, we will consider which criterion are addressed by

individual studies; while the review itself aims to satisfy *criterion f*, by investigating the consistency of findings across studies; and *criterion h*, by considering how findings can be integrated with the theoretical model and wider evidence.

Method

Protocol Registration

The review protocol was registered on Prospero after initial screening but prior to full-text review (registration number CRD42017062591; accessible at http://www.crd.york.ac.uk/PROSPERO/display_record.asp?ID=CRD42017062591).

Eligibility Criteria

Study type. Experimental studies of CBT for depression were selected for this review. This included randomised control trials (RCTs), non-randomised comparative studies, and single-group studies; while individual case studies, case series, and book chapters were excluded. Studies were only included if they reported primary quantitative data, thus qualitative studies and those undertaking secondary analysis/reviews of data were excluded.

Population. Participants were both clinical samples of individuals with depression as diagnosed according to standardised diagnostic criteria (e.g. DSM-IV, ICD-10) and/or use of valid psychometric measures of depression; and non-clinical samples of individuals demonstrating subclinical levels of depressive symptoms or considered at risk for developing depression/low mood. Clinical participants were to be considered representative of those who would receive input for depression within typical primary/secondary care psychological services, i.e. populations with additional complicating factors such as being cardiac or epilepsy patients, receiving specialist input for substance abuse, or receiving inpatient gambling treatment were excluded. While participant groups with comorbid mental health difficulties were included (provided depression remained the primary target for intervention), mixed participant groups in which not all participants had symptoms of depression (e.g. mixed sample of depression and bipolar disorder) were excluded. There was no age restriction on participants.

Intervention. The intervention under examination was CBT to alleviate or prevent depression/low mood. Studies were therefore excluded if another difficulty was the primary treatment target, e.g. anxiety. Treatment was considered CBT if it included CBT-informed

psychoeducation, cognitive (e.g. cognitive restructuring) and/or behavioural strategies (e.g. exposure, behavioural experiments). Interventions could include 1:1 and group approaches; delivered either face-to-face, via telephone, or online; including guided self-help.

Comparator. No restrictions were placed on comparator groups, which could include waitlist, other psychological therapies, support groups, 'treatment as usual' (to be defined by the study), placebo, and pharmacological interventions. No comparator was required for single group designs.

Outcome measurement. Studies had to include measurement of depression symptom severity as a primary outcome measure, using a validated and reliable questionnaire; and include a validated measure of self-efficacy. Both had to be administered at least pre- and post-treatment, providing sufficient data to examine the change in depressive symptoms and self-efficacy between pre- and post-treatment. Outcome data had to be collected directly from those receiving intervention, e.g. studies in which child symptoms were measured in the context of intervention for parents were excluded.

Additional criteria. Studies had to be written in or fully translated into English. No restriction was placed on publication date. All papers had to include a full text report that could be accessed via online/library searches or the authors, e.g. conference abstracts/presentations were excluded. Searches were not limited to published articles or peer-reviewed journals, to ensure that relevant grey literature was not overlooked.

Search and Data Collection

Information sources. The Cochrane Library, Embase, Pscynet, Pubmed and Scopus electronic databases were searched to identify studies. All searches were conducted on 24th March 2017. Authors of research within the area were contacted to identify additional unpublished studies or grey literature, but none were identified. The reference lists of articles accepted for inclusion were also searched for any overlooked papers.

Search strategy. The terms in Table 1 were searched within key words, titles and abstracts; without limits on publication date or type (see Appendix 2 for a full search strategy for each database).

Table 1.
Search terms.

Search term combinations					
"self-efficacy"	*AND*	depress*	*AND*	CBT	
"self*efficacy"		"low mood"		cognitive	behav*
selfefficacy		"mood disorder"			therap*
					treatment
					intervention
				behav*	therap*
					treatment
					intervention

Study selection. After removing duplicates, studies were screened against the PICO criteria outlined above. Titles and abstracts were screened by the first author. All papers passing this stage were then subject to a full-text review. At the full-text review stage, 20% of studies were independently assessed by a second rater. Any discrepancies were discussed, and if disagreement remained then an independent third party was asked to assess the paper, with the majority decision taken as final. All studies passing the full-text stage were included for systematic review.

Data extraction. A spreadsheet was developed for data extraction. This was piloted on a sample of papers and was deemed to meet the needs of this review, thus was applied to all included papers. Data was extracted by the primary author.

Data items. Data items included: study design and aims; participant demographic characteristics (age, gender, ethnicity, country, treatment/recruitment setting); diagnostic criteria used; details of CBT treatment delivered (theoretical basis, mode of delivery, session number/duration, total contact); details of control condition(s); drop-out rates; measures of depression and self-efficacy; other predictor/mediator variables investigated and their measurement; method and results of statistical analysis; and limitations (as identified by original authors and the reviewer). The reviewer also determined which criteria for mediation were addressed by the study.

Results

Study Selection

Initial database searches yielded 701 studies (excluding 379 duplicates). 642 were excluded at the title and abstract screening stage, leaving 59 studies which were assessed at the full text stage. 46 of these were subsequently excluded, thus 13 studies were included in

the final review. Screening the reference lists of all included studies did not reveal any additional studies. A second rater independently screened 20% of articles at the full text stage (n=12), with a high level of inter-rater agreement (Cohen's κ = .83, SE=0.16).

The most frequent reason for exclusion was failing to measure or report change in self-efficacy from pre- to post-treatment using a validated measure. Other reasons included no CBT intervention; sample with mixed diagnoses; no validated measure of depression; reporting secondary data; reporting on a sample within a specialist context, e.g. addictions treatment programme; articles not written in English; and no full text accessible (e.g. conference proceedings). See Figure 1 for flowchart of the literature search and study selection process.

Study Characteristics

The 13 studies included in the final analysis spanned the years 1990-2016, and included a total of 2507 participants (see Table 2). Studies were conducted in the United States of America (5), Australia (3), Canada (2), Germany (1), South Korea (1), and the Netherlands (1).

Design of studies. Four studies were single-group design (Backenstrass et al., 2006; Daley, 2010; Kavanagh & Wilson, 1989; Sayegh, Locke, Pistilli, & Penberthy, 2012). One was a non-randomised, between-groups design (Millear, Liossis, Shochet, Biggs, & Donald, 2008), while seven studies were considered as randomised control trials (RCTs) as they reported random assignment of participants to conditions (Hyun, Chung, & Lee, 2005; Locke et al., 2016; Ludman et al., 2003; Makarushka, 2011; Rokke, Tomhave, & Jocic, 1999; Tak, Kleinjan, Lichtwarck-Aschoff, & Engels, 2014; Yusaf & Kavanagh, 1990). One study (Jarrett, Vittengl, Doyle, & Clark, 2007) consisted of two parts, the first of which was single group design, with all participants receiving acute-phase cognitive therapy (A-CT); while the second part was an RCT in which those who responded to A-CT were randomised into control group or continuation-phase cognitive therapy (C-CT).

Participant characteristics. There was large variation in the number of participants included in each study, ranging from 18 to 1341. The majority of studies (10 out of 13) recruited adult participants, with one study specifically recruiting only older adults (aged 60+; Rokke et al., 1999). The remaining three studies recruited adolescent samples (Hyun et al., 2005; Makarushka, 2011; Tak et al., 2014).

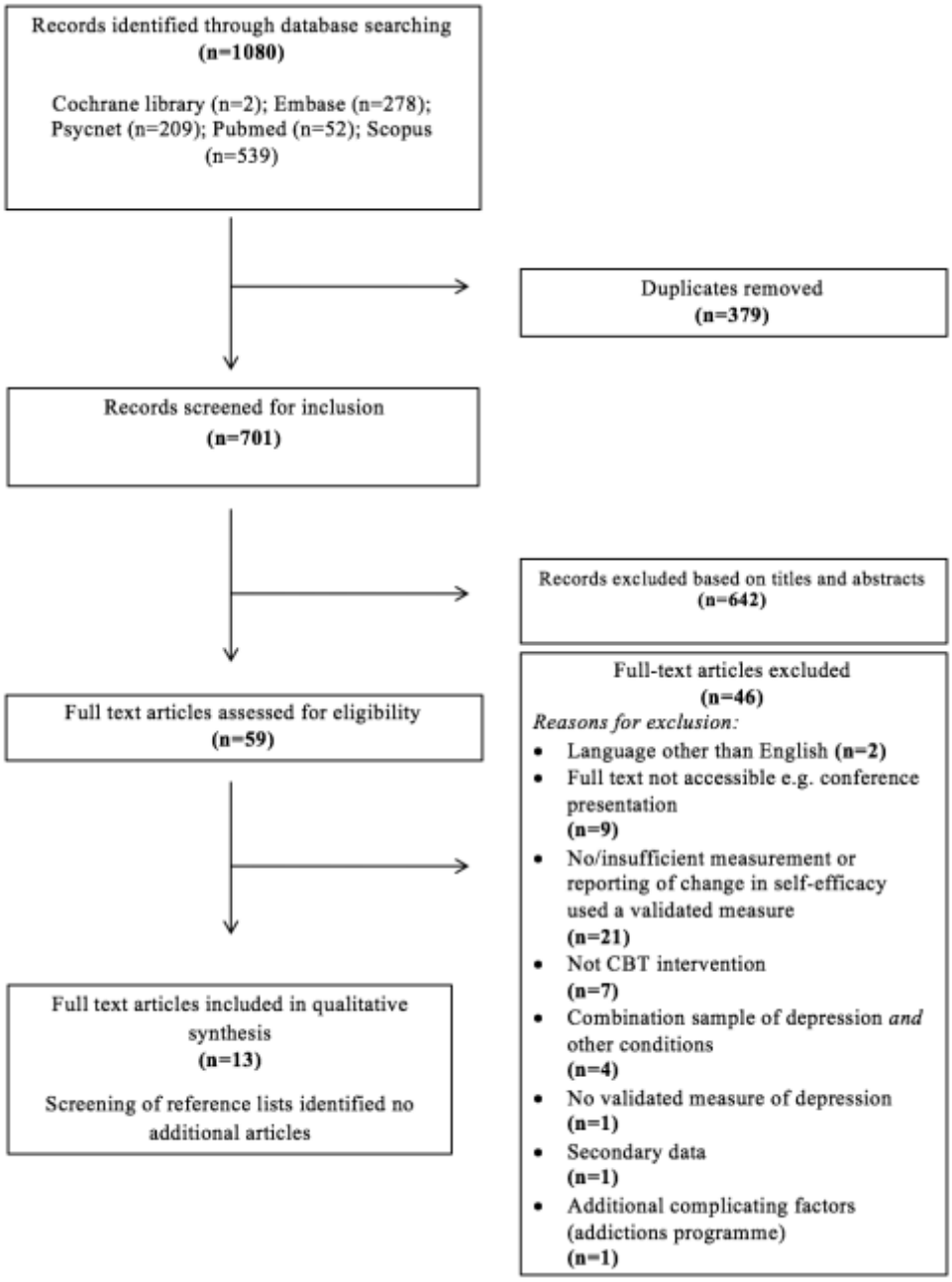

Figure 1. Flowchart of study selection process.

Eight studies recruited clinical samples with depressive disorders, diagnosed according to DSM-III/IV/IV-T-R criteria in six studies, often in combination with elevated scores on one or more standardised self-report measures of depression. One study utilised Spitzer, Endicott and Robins' (1978) Research Diagnostic Criteria (Yusaf & Kavanagh, 1990), while another used a combination of self-report measures (Rokke et al., 1999). All clinical samples were of adult age. The remaining studies consisted of non-clinical samples: two recruited adults as workplace employees and/or university alumni (Daley, 2010; Millear

et al., 2008); and three recruited adolescents from a homeless shelter (Hyun et al., 2005); schools (Tak et al., 2014); and through youth-involved agencies (Makarushka, 2011).

Six studies did not include information regarding participants' ethnicity, while one included information pertaining only to nationality. The six studies that did include information regarding ethnicity all had a predominantly white/Caucasian sample.

Interventions. Most studies (10/13) delivered CBT in group format, with total time ranging from 6 hours 40 mins (delivered over 8 sessions) to 40 hours (delivered over 20 sessions). Session duration ranged from 50 minutes to 2 hours. In most studies group sessions were delivered weekly, although in some they were twice weekly and in other cases frequency varied. Two studies utilised the Cognitive Behavioural Analysis System of Psychotherapy (CBASP) approach, which necessitated an additional 2-4 individual sessions prior to group sessions commencing (Locke et al., 2016; Sayegh et al., 2012). The remaining three studies provided individual intervention. In one study intervention was delivered face-to-face (Jarrett et al., 2007); in another, intervention was in the form of an online programme (Makarushka, 2011); and in the final study the intervention was a combination of a book, video, in-person visits, telephone contacts, and monitoring via mail (Ludman et al., 2003).

Interventions differed across studies, despite all falling under the broad umbrella of CBT and having depression/low mood as a primary target. The model of CBT varied across studies. While most studies employed traditional cognitive/behavioural models (albeit delivered through a variety of formats), four utilised adapted models of CBT. One utilised ECBT, which combined traditional CBT with cardiovascular exercise (Daley, 2010); one combined CBT with interpersonal approaches (Millear et al., 2008); and two utilised CBASP, a synthesis of interpersonal, cognitive and behavioural therapies used to treat chronic depression, based on a model of interpersonal profiles (Locke et al., 2016; Sayegh et al., 2012). It is therefore unclear to what extent fidelity to the original cognitive-behavioural model was maintained across studies.

Additionally, the context in which depression was targeted within non-clinical samples varied considerably. Only one study necessitated subthreshold symptoms of depression as a recruitment criteria (Makarushka, 2011) and targeted depression alone. The remaining four studies recruited individuals who were not necessarily presenting with difficulties, and sought to preventatively target depression as one component of broader

Table 2.
Characteristics and findings of included studies.

Study	Sample	Design	Intervention	Measures		Findings	Mediation criteria
				Depression	Self-efficacy		
Backenstrass et al (2006)	**Clinical** Adult, psychiatric inpatients, MDD (DSM-IV criteria) N = 51 64.7% female Mean age=47.41yrs (SD=11.84) Ethnicity: NR Country: Germany	Naturalistic, single-group design investigating cognitive variables as mechanisms of change in the treatment of depression	Group CBT (+ CAU, including medication); 40 hours over 10 weeks	HRSD & BDI composite	I-SEE-S subscale (German version)	**Self-efficacy:** Significant improvement from pre- to post-treatment: $F(1,42) = 6.63$** Improvement not correlated with improvement in depression: $r = -.27$ **Other variables:** **Locus of control:** Significant decreases on I-SEE-P (Powerful Others' Control Orientation) [$F(1, 42) = 5.63$*]; significantly correlated with improvement in depression scores ($r = .32$*). No significant change in I-SEE-I (Internality) [$F(1, 42) = 0.37$] or I-SEE-C (Choice Control Orientation) [$F(1, 42) = 2.88$] from pre- to post-treatment; not significantly correlated with improvement in depression (I-SEE-I: $r = .05$; I-SEE-C: $r = .17$). **NMR:** Highly significant improvement from pre- to post-treatment [$F(1, 43) = 18.64$***]; correlated with improvement in depression ($r = -.68$***)	A B F
Daley (2010)	**Non-clinical** Adult volunteer employees, exercise <2 hrs/wk N = 18 100% female Mean age=NR, range 18-65 Ethnicity: 72.2% Caucasian, 27.8% African-American Country: USA	Single group feasibility study of exercise-based cognitive therapy (EBCT)	Group EBCT; 12 hours over 6 weeks	HADS	CSE	**Self-efficacy:** Significant improvement from pre- to post-treatment: $F(1,2) = 12.51$**, $\eta^2 = .68$; greater session attendance significantly predicted post-intervention scores: $F(1,1) = 11.42$ **, $\eta^2 = .40$	A
Hyun, Chung & Lee (2005)	**Non-clinical** Adolescent male runaways, homeless shelter Ethnicity: NR Country: South Korea Exp. group: N = 14	RCT of CBT programme for this population	Group CBT; 6 hours 40 mins over 8 weeks	BDI – Korean translation	SES – Korean translation	**Self-efficacy:** Significant improvement in exp. group ($z = -2.098$, $p = .036$ but not CG ($z = -.969$, $p = .333$) **Other variables:** **Self-esteem:** No significant changes in in either exp. group ($z = 1.191$, $p = .234$) or CG ($z = 1.691$, $p = .091$)	A F

	0% female Mean age=15.57yrs (SD=2.10) <u>CG:</u> N = 13 0% female Mean age=15.38yrs (SD=2.87)						
Jarrett, Vittengl, Doyle & Clark (2007)	**Clinical** Adult, outpatients, recurrent MDD (DSM-IV criteria and HRSD ≥ 16), clear inter-episode recovery N = 155 74.2% female Mean age=41.3yrs (SD=11.0) Ethnicity: 87.1% Caucasian, 7.1% African-American, 4.5% Hispanic, 1.3% Native American Country: USA After A-CT, responders (no longer meeting DSM-IV criteria, HRSD ≤ 9) continued to RCT for C-CT: N = 84 (C-CT=41, CG=43)	Single-group design to explore change in cognitive content during A-CT RCT to explore impact of C-CT on responders to A-CT	Individual CT; A-CT = Up to 20 hours over 12 weeks; C-CT = Up to 15 hours over 8 months	HRSD, IDS-CR, IDS-SR & BDI composite	SES	**<u>Self-efficacy:</u>** Significant improvement from pre- to post-A-CT, large effect size: d = 0.83, p<.0004; significant moderate correlation with changes in depression (r = .57, p,.004). Change from pre- to post-C-CT not significantly different for C-CT group vs. CG at all FUs (p > .08). **<u>Other variables:</u>** **Attributions of failure:** Significant improvement from pre-A-CT to post-A-CT (large effect size, d = 0.79, p<.0004); significant moderate correlation with changes in depression (r = .50, p,.004). Change from pre- to post-C-CT significantly different for C-CT vs. CG at 24 months post-A-CT (p = .003). **Dysfunctional attitudes:** Significant improvement from pre-A-CT to post-A-CT (large effect size, d = 1.05, p<.0004); significant moderate correlation with changes in depression (r = .60, p,.004). Change from pre- to post-C-CT not significantly different for C-CT group vs. CG at all FUs (p > .08). **Attributions of success:** Significant improvement from pre-A-CT to post-A-CT (small effect size, d = 0.30, p<.0004); significant moderate correlation with changes in depression (r = .31, p,.004). Change from pre- to post-C-CT not significantly different for C-CT group vs. CG at all FUs (p > .08).	A B F
Kavanagh & Wilson (1989)	**Clinical** Adult, community volunteers, MDD (DSM-III criteria and BDI score ≥ 18) N = 42 54.8% female Mean age=40.1yrs (range 22-60) Ethnicity: NR Country: Australia	Single group design to examine correlates of improvement during cognitive treatment for depression and predict outcomes at FU	Group CBT; 18 hours over 5-9 weeks	BDI, HRSD	CEQ, SCQ, ICQ self-efficacy section	**<u>Self-efficacy:</u>** Significant improvement from pre- to post-treatment: CEQ F(1, 40) = 26.68***; SCQ F(1, 41) = 17.21**; ICQ: F(1, 39) = 8.58** Increases on CEQ alone correlated with falls in BDI scores (r = .71***) **<u>Other variables:</u>** **Self-Monitored Cognition:** Significant improvement from pre- to post-treatment [F(1, 34) = 6.50, p = .025] **Self-Control Schedule:** Significant improvement from pre- to post-treatment [F(1, 41) = 27.75**] **<u>All variables:</u>** Gains in self-efficacy on CEQ and SCQ and improved control of negative cognitive on SMC produced a multiple R of .81 Each variable contributed significantly to the equation: -6.380 + 0.005 CEQ + 2.687 SMC + 0.547 SCQ (not significantly improved by other variables)	A B F B

Locke, Sayegh, Penberthy, Weber, Haentjens & Turecki (2016)	**Clinical** Adult, outpatients, MDD (DSM-IV-TR criteria), at risk for persistent depressive disorder N = 58 55.2% female Mean age=45.3 yrs (SD=10.4, range 23-63) Ethnicity: Mostly Caucasian Country: Canada	RCT to evaluate effectiveness of CBASP vs. BA	Group CBASP (N = 36) vs. group BA (N = 22); 2 individual sessions + 40 hours group over 20 weeks	BDI, HRSD, IDS-CR, IDS-SR	CSIE; *Also weekly self-efficacy journal - not reported here as not validated.*	**Self-efficacy:** Mean change from pre-treatment to 12 week FU was NS: b_{10} = 0.016, SE = .019, but significant improvement on some CSIE subscales: agentic self-efficacy (b_{10} = 0.105*, SE = .036), agentic-and-uncommunal self-efficacy (b_{10} = 0.065, SE = .029*), and agentic-and-communal self-efficacy (b_{10} = 0.104, SE = .034, p < .005); no significant differences on remaining self-efficacy subscales: communal, communal-and-unagentic, unagentic, unagentic-and-uncommunal, uncommunal Treatment type moderated the effect of time CSIE agentic and agentic-and-uncommunal self-efficacy scales (bs = .155 and .134, SEs = .071 and .057); both increased in CBASP groups (bs = .163 and .116, SEs = .043 and .036) but not in BA groups (bs = .008 and −.019, SEs = .059 and .047).	A
Ludman at al. (2003)	**Clinical** Adults, 'new' antidepressant prescription, significant improvement in index depressive episode, high risk for recurrence/relapse Country: USA Exp. group N = 194 24.6% male Mean age=46.4yrs (SD=11.9) Ethnicity: 92.3% Caucasian CAU N = 192 28.1% female Mean age=45.6yrs (SD=13.3) Ethnicity: 88% Caucasian	RCT to examine behavioural factors associated with symptom outcomes in intervention to prevent relapse	Exp, group: Educational book, videotape, 2x visits, 3x telephone contacts, 4x personalised mailings; over 12 months vs. CAU: including specialist referrals if required	SCL-90 depression subscale	Bush et al's (2001) 6-item scale	**Self-efficacy:** Significant improvement from pre- to post-treatment: ß = 0.39**, 95% CI = 0.14-0.64; Self-efficacy for managing depression significantly correlated with improvements in depression scores: p < .0001, 95% CI [-0.15 to -0.10] within groups **Other variables:** **Keeping track of depressive symptoms:** associated with improvements in depression: p < .05, 95% CI [-0.12 to 0.00] **Engaging in pleasant activities:** associated with improvements in depression: p < .0001, 95% CI [-0.33 to -0.20] within groups **Engaging in social activities:** associated with improvements in depression: p < .0001, 95% CI [-0.22 to -0.12] within groups **Monitoring EWS:** associated with increase in depression: p < .01, 95% CI [0.02 to 0.14] within groups **Planning coping with high risk situations:** unrelated to depression scores	A B F
Makarushka (2011)	**Non-clinical** Subthreshold depression (CES-D >15, not meeting DSM-IV diagnostic criteria for a mood disorder using K-SADS-E) N = 161 56% female Mean age=12.7yrs (SD=1.24) Ethnicity: 65% White Country: USA (30 states)	RCT to establish the efficacy of a computerized interactive, multimedia, CBT-based depression prevention program	Exp. group (N = 76): Online CBT intervention; 6 modules over 6 weeks CG (N = 85) Browsing websites	K-SADS-E, CES-D, LIFE (FU only)	22-item rating scale	**Self-efficacy:** Significantly greater improvement for exp. group from pre- to post-treatment: F = 9.07, p = .003, d = .42 (controlling for pre-test scores); also from pre-treatment to follow-up: F = 13.52***, d = .57	A

Millear, Liossis, Schochet & Biggs (2008)	**Non-clinical** Gender: NR Ethnicity: NR Country: Australia Exp. group N = 28 Volunteer employees Mean age=35.4yrs (SD=9.2) CG N =71 University alumni Mean age 37.11yrs (SD 10.9)	Experimental design to evaluate a pilot of resilience building programme – PAR	Group intervention using CBT and interpersonal approaches; 11 hours over 11 weeks vs. CG	DASS-21 depression subscale	CSE	**Self-efficacy:** Significantly greater improvements from pre- to post-treatment in exp. group with large effect size: $F(1, 68) = 8.68$, $p = .004$, $d = 1.12$, $\eta 2 = .113$; maintained at FU ($F(1, 47) = 10.76$, $p = .002$, $d = 1.14$, $\eta 2 = .186$)	A
Rokke, Tomhave & Jocic (1999)	**Clinical** Older adults, outpatients, depression (HRSD ≥ 10, BDI ≥ 10, GDS ≥ 10) N = 64 (data reported only for 40, 24 dropped out) 38% female Mean age=66 yrs (SD 6.1; range 60-86) Ethnicity: 100% White Country: USA	RCT to explore whether giving client choice over targets for therapy (cognitive or behavioural) impacts on effectiveness	Self-management therapy (cog or beh; choice vs. no choice) vs. WL; 10 hours over 10 weeks	HRSD, BDI, GDS	3-item self-efficacy scale	**Self-efficacy:** Significant improvements from pre-treatment to post-treatment $F(2, 34) = 12.00$***; no mean differences between the behavioural or cognitive target conditions and no differential change across time between conditions ($F < 1.0$).	A
Sayegh et al. 2012)	**Clinical** Outpatients, treatment-resistant MDD (SCID-I and DSM-IV) N = 44 59.1% female Mean age = females 47.1yrs (SD=7.3), males 46.4yrs (SD=9.9) Ethnicity: NR Country: Canada	Single group design to look at effectiveness of CBASP adapted to a group design	2-4 individual sessions then group CBASP**;** 24-26 hours over 12-13 weeks	BDI	CSIE	**Self-efficacy:** Marginally significant improvement on overall CSIE from pre- to post-treatment: $F(1, 42) = 3.1$, $p \leq .10$ Significant improvement for agentic behaviours (pre- and post-treatment: $F(1, 42) = 5.1$*; NS change in other CSIE quadrants Males scored higher than females on self-efficacy for agentic behaviours and lower than females on self-efficacy for unagentic behaviours (Fs > 5, ps < .05), but gender did not moderate the effects of treatment (Fs < 1, ps > .5).	A

Tak, Kleinjan & Engels (2014)	**Non-clinical** Adolescents from 8th grade to University level across 9 schools N = 1341 (exp.=634, CG=707) 47.3% female Mean age=13.9yrs (SD=0.60) Ethnicity: 83.1% Dutch, 16.9% other Country: Netherlands	RCT to evaluate long term effectiveness of a group resiliency programme for adolescents	Group CBT-based resiliency training (exp. group, vs. mentor lessons as usual; 13hrs 20 mins over 16 weeks	CDI – Dutch version	SEQ academic, social and emotional subscales	**Self-efficacy:** Social self-efficacy: decreased from pre- to post-treatment for exp. group (ß = -0.135***, lower than CG); increased from post-treatment to 18 month FU (ß = 0.229, *p* = .039, NS diff to CG). Academic self-efficacy: NS change from pre- to post-treatment (ß = 0.002, *p* = .367) or from post-treatment to 18 month FU (ß = 0.101, *p* = .194) Emotional self-efficacy: NS change from pre- to post-treatment (ß = 0.038, *p* = .093) or from post-treatment to 18 month FU (ß = 0.067, *p* = .288)	A
Yusaf & Kavanagh (1990)	**Clinical** Community volunteers, depressive episode (BDI ≥ 18, SDS ≥ 40, met Research Diagnostic Criteria of Spitzer, Endicott and Robins (1978) for MDD, current episode ≥ 1 month) N = 60; only 43 completed 81.4% female (85.3% of CBT sample, 79.2% of WL sample) Mean age=39yrs (NS difference between groups) Ethnicity: NR Country: Australia	RCT to test Kavanagh's (1983) proposed model of depression (reciprocal relationship among self-efficacy, performance and mood) as an explanation of response to CBT	Group CBT (N = 31, 19 completed) vs. WL (N = 29, 24 completed); 20 hours over 8 weeks	BDI, SDS	Athletics Efficacy Questionnaire and Assertion Efficacy Questionnaire; *Also 5 non-validated scales, not reported here*	**Self-efficacy:** Exp. group showed significantly greater improvements: Total *F*(2, 38) = 3.30*; Assertion *F*(1, 39) = 5.15*; Athletics *F*(1, 39) = 5.28* Assertion self-efficacy change significantly correlated with BDI change in exp. group (*r* = .70*) and WL (*r* = .37*) and SDS change in exp. group (*r* = .61*) but not WL. Athletics self-efficacy change significantly correlated with BDI change (*r* = -.53*) in exp. group but not WL, and SDS change in exp. group (*r* = -.58*) and WL (*r* = -.40*) **Other variables:** Changes in some self-monitoring scales and negative thinking also correlated with change in BDI and SDS for exp. group	A B F

* p<.05; ** p<.01; ***p<.001

Abbreviations used: NR = not reported; SD = standard deviation; M = mean; SE = standard errors; Exp. group = experimental group; CG = control group; WL = waiting list; RCT = randomised control trial; FU = follow-up; NS = not significant; UG = undergraduate; CAU = care as usual; DSM-III/DSM-IV/DSM-IV-TR=Diagnostic and Statistical Manual of Mental Disorders, 3rd/4th Edition/4th Edition – Text Revision; K-SADS-E = Schedule for Affective Disorders and Schizophrenia for School-Age Children, Epidemiological Version; SCID = Structured Clinical Interview for DSM-IV Axis I Disorders; MDD = Major Depressive Disorder; BA = behavioural activation; CBASP = Cognitive Behavioural Analysis System of Psychotherapy; CT = cognitive therapy; A-CT = acute phase cognitive therapy; C-CT = continuation phase cognitive therapy; ATQ = Automatic Thoughts Questionnaire

concerns: general resiliency (Millear et al., 2008; Tak et al., 2014), comorbid depression and insomnia (Daley, 2010), and depression and self-esteem (Hyun et al., 2005). The extent to which depression was specifically targeted/addressed within these studies is therefore unclear.

Comparators. As noted above, four studies were single-group design thus had no comparator group. In the first stage of Jarrett et al.'s (2007) study a single group approach was taken, and in the second part active CBT intervention was compared with an assessment-only control group (who had previously received A-CT). In 5 studies, CBT-based intervention was compared with care as usual/waitlist/assessment only control (Hyun et al., 2005; Ludman et al., 2003; Millear et al., 2008; Tak et al., 2014; Yusaf & Kavanagh, 1990). In Rokke et al.'s (1999) study, four of the five groups received an intervention under the umbrella of CBT, whilst the fifth condition was wait list. Similarly, another study (Locke et al., 2016) compared two different therapeutic interventions falling within the remit of CBT (CBASP and behavioural activation; BA), thus both were considered intervention groups for the purpose of this review. In the final study, an online CBT intervention was compared to being directed to websites that included links to other sites containing educational information about depression (Makarushka, 2011). No studies included pharmacotherapy or non-CBT treatment as an active comparator.

Overall, no studies provided an alternative (i.e. non-CBT) active treatment that controlled for the intervention time and professional input of the experimental condition. Four studies had no comparators at all, and of the five waitlist/care as usual/assessment only control conditions, only one controlled for the time spent in intervention (Tak et al., 2014, with adolescents in the control group attending their usual lessons).

Measurement of depression. In total, 11 measures of depression were used across studies: two clinician-rated, and nine self-report (see Table 3). The measurement of depression therefore varied somewhat across studies. The Beck Depression Inventory (Beck, Steer, & Brown, 1996) was the most commonly used tool, used in eight studies. No study reported continuous measurement of depression throughout treatment (i.e. measurement at each treatment session), although most studies included at least one follow up.

Table 3

Measures of depression and self-efficacy used in included studies.

DEPRESSION			
Abbreviation	**Measure**	**Format**	**Studies used in**
BDI	Beck Depression Inventory	Self-report	Backenstrass et al (2006); Hyun et al. (2005) – Korean translation; Jarrett et al. (2007); Kavanagh & Wilson (1989); Locke et al. (2016); Rokke et al. (1999); Sayegh et al. (2012); Yusaf & Kavanagh (1990)
CDI	Children's Depression Inventory	Self-report	Tak et al. (2014) – Dutch version (excluded question about suicidal thoughts after baseline)
CES-D	Centre for Epidemiologic Studies Depression Scale	Self-report	Makarushka (2011)
DASS-21	Depression, Anxiety, Stress Scales: *Depression subscale*	Self-report	Milliear et al. (2008)
GDS	Geriatric Depression Scale	Self-report	Rokke et al. (1999)
HADS	Hospital Anxiety and Depression Scale	Self-report	Daley (2010)
HRSD	Hamilton Rating Scale for Depression	Clinician rating	Backenstrass et al (2006); Jarrett et al. (2007); Kavanagh & Wilson (1989); Locke et al. (2016); Rokke et al. (1999)
IDS-CR	Inventory of Depressive Symptomatology – Clinician rated	Clinician rating	Jarrett et al. (2007); Locke et al. (2016)
IDS-SR	Inventory of Depressive Symptomatology – Self-report	Self-report	Jarrett et al. (2007); Locke et al. (2016)
SCL-90	Symptom Checklist-90 - *Depression subscale*	Self-report	Ludman et al. (2003)
SDS	Self-rating Depression Scale	Self-report	Yusaf & Kavanagh (1990)
SELF-EFFICACY			
Abbreviation	**Measure**	**Format**	**Studies used in**
	Assertion Efficacy Questionnaire	Self-report	Yusaf & Kavanagh (1990)
	Athletics Efficacy Questionnaire	Self-report	Yusaf & Kavanagh (1990)
	Bush et al.'s (2001) 6 item scale	Self-report	Ludman et al. (2003)
CEQ	Cognitive Efficacy Questionnaire	Self-report	Kavanagh &Wilson (1989)
CSE	Coping Self-Efficacy Scale	Self-report	Daley (2010); Milliear et al. (2008)
CSIE	Circumplex Scales of Interpersonal Efficacy	Self-report	Locke et al. (2016); Sayegh et al. (2012)
I-SEE I-SEE-S	Inventory for the Measurement of Self-Efficacy and Externality Self-concept of own competence subscale	Self-report	Backenstrass et al (2006) – German version
ICQ	Interpersonal Concerns Questionnaire – *Self-efficacy section*	Self-report	Kavanagh &Wilson (1989)
	Makarushka's (2011) 22 item rating scale	Self-report	Makarushka (2011)
	Rokke et al.'s (1999) 3-item self-efficacy scale	Self-report	Rokke et al. (1999)
SCQ	Stress Control Questionnaire	Self-report	Kavanagh &Wilson (1989)
SES	Self-Efficacy Scale	Self-report	Hyun et al. (2005) – Korean translation; Jarrett et al. (2007)
SEQ	Self-Efficacy Questionnaire	Self-report	Tak et al. (2014) – Dutch translation

Measurement of self-efficacy. 13 different self-efficacy measures were used across studies (see Table 3). All were self-rating tools, as would be expected given the construct being measured. While most studies used pre-existing tools, a small number developed and validated their own measures. Two studies included additional measurement of self-efficacy in the form of weekly journal ratings (Locke et al., 2016) and self-rating scales (Yusaf & Kavanagh, 1990), but as these tools were not validated the findings are not presented here.

Measures captured self-efficacy in a variety of domains. While SES and I-SEE-S captured general self-efficacy regarding performance competence, other measures reflected self-efficacy in more specific domains. Domains included assertion; athletic ability (although this was intended to reflect more generalised changes in self-efficacy, given that athleticism was not a treatment target); managing and preventing depression (Bush et al.'s 2001 scale); ability to cope with stressful life events (SCQ); ability to learn and/or implement helpful actions or coping behaviours related to negative thoughts (CEQ, CSE, Makarushka's 2011 scale, Rokke et al.'s 1999 scale); interpersonal self-efficacy (CSIE and ICQ: self-efficacy section); and academic, social and emotional self-efficacy (SEQ).

No studies provided continuous (session-by-session) measurement of self-efficacy using validated measures, although some captured self-efficacy at follow-up, and a small number captured self-efficacy at points during treatment.

Study Results

The findings will be considered according to each criterion for demonstrating mediation. It is noted that all studies demonstrated improvements in measures of depression, except for the school-based resilience building programme of Tak et al. (2014), which was not significantly effective in preventing symptoms of depression, and Yusaf & Kavanagh's (1990) treatment study, in which both treatment and control groups showed significant improvements in depressive symptoms (not significantly different between groups).

Criterion a: **Evidence of a strong association between CBT for depression and change in self-efficacy.** All but one study demonstrated some significant improvements in self-efficacy as a result of CBT intervention. Self-efficacy improved significantly from pre- to post-treatment in single group studies (Backenstrass et al., 2006; Daley, 2010; Kavanagh & Wilson, 1989; Yusaf & Kavanagh, 1990), with Kavanagh and Wilson finding that post-treatment levels of self-efficacy in their clinical sample approached that of undergraduate

samples on two of their three measures (CEQ and SCQ). One study found that greater improvements in self-efficacy were seen in participants who attended more sessions (Daley, 2010). While Jarrett et al. (2007) found a significant improvement in self-efficacy in his single group for A-CT, when initial responders were subsequently split into C-CT and control group, those who attended C-CT did not demonstrate significantly greater change in self-efficacy during their additional treatment, compared to the control group.

Regarding comparative studies, improvements in self-efficacy were shown to be an effect of intervention, as changes observed in control groups were either non-significant or significantly smaller than those in experimental groups (Hyun et al., 2005; Ludman et al., 2003; Makarushka, 2011; Millear et al., 2008), with effects also maintained at 6 month follow-up (Makarushka, 2011; Millear et al., 2008). Additionally, Rokke et al. (1999) found no significant differences between the cognitive and behavioural arms of their study, with significant improvements in self-efficacy demonstrated in response to both treatments.

The findings from the two studies evaluating CBASP interventions are more complex. Self-efficacy was measured using the CSIE, which assesses self-efficacy in each of eight octants of the interpersonal circumplex; a model used to organise interpersonal dispositions along axes of agency and communion. Locke et al. (2016) found no significant effect on overall CSIE scores and Sayegh et al. (2012) found only a marginally significant effect ($p \leq .10$). When the impact of intervention was assessed for each individual CSIE quadrant, both studies found a significant effect on agentic self-efficacy, while Locke et al. also found significant changes in agentic-and-uncommunal self-efficacy and agentic-and-communal self-efficacy. According to Locke, these changes represent increased belief in one's ability to be warm, influential, assertive and aggressive as needed; and reduced beliefs about being meek and withdrawn. It is noted that in Locke's study, these findings were the result of analysis across both CBASP and BA groups.

As well as being one of only two studies which failed to show an effect of intervention on depression symptoms, Tak et al. (2014) was the only study which failed to demonstrate improvements in self-efficacy. There was no significant change in academic or emotional self-efficacy, while the experimental group reported a significant decrease in social self-efficacy from pre- to post-treatment. The experimental group's post-treatment social self-efficacy scores fell below those of the control group, indicating an iatrogenic

effect of intervention. However, this effect dissipated by 18-month follow-up, with social self-efficacy scores equivalent across intervention and control groups.

Criterion b: **Evidence of an association between change in self-efficacy and change in symptoms of depression during CBT.** As noted above, all studies except for that of Tak et al. (2014) and Yusaf & Kavanagh (1990) demonstrated significant improvements in both depression and self-efficacy during CBT. Tak et al. found no significant improvement in either, while Yusaf & Kavanagh found greater improvements in self-efficacy for the experimental vs. control group, despite finding no differential change in depression scores (discussed further below). However, only five of the included studies formally assessed the relationship between change in self-efficacy and change in symptoms of depression.

Four studies found a significant correlation between improvements in self-efficacy and symptoms of depression. Kavanagh and Wilson (1989) found that self-efficacy related to coping with stressful life events (SCQ) and taking action regarding negative emotions and enjoyable experiences (CEQ) contributed significantly to a regression equation predicting change in depression, which also included self-monitored cognition (scales which corresponded to actions on the CEQ). Moreover, CEQ alone was found to be highly correlated to change in depression scores. Additionally, Yusaf & Kavanagh (1990) found that changes in assertion and athletic self-efficacy and both measures of depression were significantly correlated in the experimental group; with change in athletic self-efficacy also correlated with SDS changes in the wait list control group. Within this study, changes in negative thinking and self-monitoring scales were also correlated with improvement in depression.

Two further studies investigated the correlation between change in several cognitive variables and change in depression. Jarrett et al. (2007) found significant moderate correlations between decrease in symptoms of depression and increase in general performance self-efficacy (SES), as well as between depression and dysfunctional attitudes, and attributions of success and failure in A-CT. However, when change in depression was controlled for, change in cognitive variables was no longer significant; while moderate to large effect sizes for change in depression remained when controlling for change in cognitive variables. This indicated that change in self-efficacy may be concurrent with or resulting from changes in depression, rather than a cause of improvements in symptoms. The authors

proceeded to investigate whether change in cognitive variables or in depression was primary, but self-efficacy was excluded from analysis due to insufficient measurement.

Similarly, Ludman et al. (2003) found that improvements in self-efficacy for managing depression were significantly correlated to change in depression scores, as were increases in the other measures: keeping track of depressive symptoms, engaging in pleasant activities, and engaging in social activities; while monitoring early warning signs of depression was correlated with increases in symptoms of depression

Conversely, Backenstrass et al. (2006) was the only study that found changes in self-efficacy and in depression scores were not significantly correlated, whilst changes in other variables explored (negative mood regulation expectancies and locus of control regarding powerful others) were significantly correlated with changes in depression.

In summary, few studies directly examined the relationship between improvements in self-efficacy and in depressive symptoms, providing somewhat mixed evidence. While 80% of these studies found evidence of a correlation, several studies found that change in depression scores was also significantly correlated with change in other cognitive variables, indicating that the relationship between changes in self-efficacy and depression is not unique. Furthermore, the finding in one study that improvements in athletics self-efficacy and depression were significantly correlated in the waitlist group as well as the experimental group (Yusaf & Kavanagh, 1990) casts doubt on whether this relationship is unique to CBT intervention. As athleticism was not a treatment target, this may indicate correlated improvements in general self-efficacy and depression even in the absence of intervention.

Criterion c & criterion d: **Evidence of a dose-response relationship, i.e. that bigger changes in self-efficacy lead to bigger changes in symptoms of depression, and evidence that direct experimental manipulation of self-efficacy results in change in symptoms of depression.** No studies provided information pertaining to dose-response relationship or involved direct manipulation of self-efficacy: all studies were measurement only. There is therefore insufficient data to evaluate these criteria.

Criterion e: **Evidence of temporal precedence, i.e. that change in self-efficacy during CBT occurs prior to change in symptoms of depression.** While some studies explored whether self-efficacy at the end of treatment was predictive of subsequent

improvements in depression at follow up (Backenstrass et al., 2006, did not find significant predictive power; Kavanagh & Wilson, 1989 found CEQ and SCQ significantly predicted time spent in remission), no studies undertook sufficient measurement of self-efficacy and depression throughout treatment to investigate temporal precedence of change. While one study (Locke et al., 2016) did examine temporal precedence, they did so using non-validated weekly journal rating scales, thus this data is not included as per our inclusion criteria.

Criterion f: **Evidence of specificity, i.e. that change in symptoms of depression during CBT is uniquely accounted for by change in self-efficacy.** No studies provided a sufficient level of evidence to indicate that changes in self-efficacy accounted for change in symptoms of depression, but as noted above they did provide evidence regarding correlation between change in self-efficacy and depression symptoms. However, this was not a specific relationship, as multiple other cognitive variables were also significantly correlated with depression change across studies: negative mood regulation expectancies, locus of control, negative thinking, self-monitored cognition, dysfunctional attitudes, and attributions of success and failure; as well as several behavioural variables: keeping track of depressive symptoms, engaging in pleasant activities, engaging in social activities, and monitoring early warning signs of depression.

Discussion

The current study aimed to evaluate the role of self-efficacy as a mediator in CBT for depression. Using a systematic search strategy and predefined inclusion/exclusion criteria, 13 studies were included from an initial pool of 701. The data extracted from these studies was examined with regards to the eight criteria necessary to demonstrate mediation (Kazdin, 2007).

Included studies provided direct evidence for only the first two criteria of mediation. All studies (100%) included sufficient data to evaluate change in self-efficacy during CBT for depression, with all but one study (which also failed to show significant improvement in depression) demonstrating significant improvement (*criterion a)*. Only five of the included studies (38%) included sufficient data to evaluate the relationship between change in depression and self-efficacy, with four of these studies finding a significant correlation (*criterion b*).

The correlations found were not unique to self-efficacy, as changes in multiple other cognitive and behavioural variables were found to be associated with changes in depression (*criterion f)*. Moreover, in one study changes in self-efficacy and depression were correlated in the waitlist condition as well as the experimental group, suggesting these changes were not unique to CBT intervention. None of the included studies provided sufficient evidence to evaluate a dose-response relationship (*criterion c*) or temporal precedence (*criterion e*); and none investigated the effect of direct manipulation of self-efficacy (*criterion d*). The latter is unsurprising given this review's focus on treatment studies, in which manipulating differential change in cognitive variables across groups may be challenging, thus a measurement approach is most appropriate (Bullock, 2010; Spencer, 2005).

The quality of many of the included studies suggests caution in drawing strong conclusions from the current results. Several studies were single-group design, and those that did include comparator groups either failed to include an active treatment control which compensated for the professional and social contact experienced by the intervention group; or the control group represented another form of CBT. As such, it is unclear whether the changes in self-efficacy demonstrated during treatment are CBT-specific, or a common factor across treatment modalities. Additionally, some interventions represented an adapted/integrated CBT approach and thus fidelity to the model is questionable.

Given these methodological constraints, we will briefly focus only on evidence generated from the most robust study designs: RCTs examining treatment of clinical samples, using a traditional CBT model. Three studies met these criteria: Ludman et al. (2003), Rokke et al. (1999), and Yusaf & Kavanagh (1990). All three studies demonstrated improvements in depression (although improvement was not significantly different to waitlist control group in Yusaf & Kavanagh's study); all three found significant improvements in self-efficacy with CBT intervention; and two (Ludman et al.; Yusaf & Kavanagh) also demonstrated a significant correlation between change in self-efficacy and change in depression. However, both studies also found significant correlations between change in depression and other variables (self-monitoring; negative thinking; monitoring symptoms and early warning signs; engaging in pleasant and social activities). Therefore, even within a small number of robust studies it appears that the role of self-efficacy in CBT for depression is not unique.

It is helpful to consider the current findings in light of a similar review conducted by Fentz et al. (2014) regarding the role of self-efficacy in CBT for panic disorder. The authors evaluated studies against mediation criteria matching our criteria *a, b, d,* and *e,* as well as a criterion around evidencing formal statistical analysis of mediation. While the overall number of studies in their sample was much higher (n=33) the proportions of studies investigating criterion *a* and *b* were similar to this review: 85% and 30%, respectively. However, unlike the current review, Fentz. et al. also found a small amount of evidence regarding criterion *e* (12% of studies) and formal statistical analysis of mediation (9% of studies). As with the current review, no studies fulfilled all criteria.

Our findings are somewhat in keeping with those of Fentz et al. (2014), as like the previous authors we found consistent evidence that CBT changes self-efficacy, and that these changes are related to change in symptom outcomes. Both reviews have failed to demonstrate specificity of self-efficacy as a mediator. Fentz et al. found that catastrophic beliefs played a comparable role to self-efficacy beliefs; while in the current study a multitude of other factors were found to demonstrate strong relationships with change in depression. A key difference between our review and the previous authors', is that Fentz et al. identified that one other mediator in particular (catastrophic beliefs) was frequently explored alongside self-efficacy, whilst in the current review there was no one variable that consistently arose.

Furthermore, the literature regarding the role of self-efficacy beliefs in panic disorder led Fentz et al. (2014) to focus on self-efficacy in one specific domain: panic self-efficacy. In contrast, given that depression can encompass changes in self-efficacy across many areas of life, it was not theoretically indicated to restrict our search to a single domain of self-efficacy. Subsequently, included studies explored self-efficacy in a range of domains, such as assertiveness, athleticism, academic achievement, coping with stress, and implementing helpful strategies related to negative thinking. While this could be taken to suggest that studies were not measuring the same construct, the overall consistency of findings across studies may indicate that CBT has an overarching effect on generalised self-efficacy, as measured across various domains. Further research may seek to explore this possible interpretation, by measuring self-efficacy in a variety of domains and examining whether changes with CBT are consistent across domains, or specific to those domains targeted in intervention.

The findings of this review are coherent with SLT (*criterion h*) (Bandura, 1977, 1982, 1997; Maddux, 2002; Maddux & Meier, 1995), and in particular the hypothesis that intervention (in this case, CBT for depression) does serve to increase self-efficacy, which is related to change in clinical symptoms. Interestingly, in one study where symptoms of depression did not improve neither did self-efficacy (Tak et al., 2014), while in another there was differential change in self-efficacy between groups even without differential change in depression (Yusaf & Kavanagh, 1990). The current findings largely corroborate previous literature demonstrating a relationship between self-efficacy and depressive symptoms (Ehrenberg, 1991; Maciejewski et al., 2000; McFarlane et al., 1995; Muris et al., 2001; Tahmassian & Jalali Moghadam, 2011).

Implications

The evidence reviewed in the current study was not sufficient to establish self-efficacy as a mediator of treatment response in CBT for depression, although it showed some promise. Further research is required that directly explores the role of self-efficacy as a mediator, including continuous measurement of self-efficacy and symptoms of depression throughout treatment, to enable investigation of the temporal precedence of change. Research should also consider self-efficacy alongside other potential cognitive and behavioural mediators, such as those considered in current studies and the broader literature, e.g. negative thinking (Kaufman, Rohde, Seeley, Clarke, & Stice, 2005; Makarushka, 2011; Yusaf & Kavanagh, 1990), locus of control (Backenstrass et al., 2006), early change in cognition (DeRubeis et al., 1990; Driessen & Hollon, 2010), attributional styles (Jarrett et al., 2007) teaching compensatory skills (Barber & DeRubeis, 1989), and engagement in pleasant and social activities (Ludman et al., 2003).

While CBT for depression certainly seems to improve self-efficacy, the importance of this for symptom change remains unclear. The current evidence does not give any insights into which particular aspects of CBT may be most important for enhancing self-efficacy, as the one study that distinguished cognitive and behavioural elements of treatment found no significant differences in self-efficacy change between groups (Rokke et al., 1999).

Given that previous research has established self-efficacy as a potential mediator in the development of depression (Asselmann et al., 2016; Maciejewski et al., 2000; Muris et al., 2001), as well as predictor of change in response to treatment (Gopinath et al., 2007; Perraud, 2000; Simons et al., 1985; Stiles-Shields et al., 2015; Tonge et al., 2005; Williams

et al., 1989), it is interesting to consider whether self-efficacy may in fact be a moderator of treatment effectiveness, rather than a mediator. If so, this may indicate the importance of bolstering self-efficacy prior to commencing treatment, rather than waiting for it to improve as treatment progresses.

Limitations

The current review has several limitations. The first is that inter-rater reliability was only established at one stage of the review process, at the full text screening stage. Additional second rating at the initial title/abstract screening and final data extraction stages would have provided more stringent checks of reliability. Additionally, while the quality of included studies has been discussed throughout, formal quality assessment using an established tool would have provided a more rigorous measure of quality and further informed the conclusions drawn here.

It is possible that some relevant studies may have been missed from initial searches, if they did not refer to 'self-efficacy' in their title or abstract (e.g. they may have referred more generally to 'psychological processes/mediators' instead). A recent similar review (Fentz et al., 2014) did not include self-efficacy in their initial search terms, yielding a much higher number of initial search results (3371, compared to 1080 in the current review). However, given the high level of research interest that CBT for depression has received in recent decades it was anticipated that conducting a broader search with only variants of 'depression/low mood' and 'CBT' as search terms would have generated an unmanageable number of search results, as was confirmed by conducting a test search on a single database, (n=12,340 results). Given the time constraints of this review it simply would not have been feasible to screen such a high number of studies. Furthermore, it is anticipated that other strands of the chosen search strategy would have highlighted any key studies that were not identified during initial searches.

Conclusions

In conclusion, this review found evidence of an effect of CBT for depression on self-efficacy; and evidence that change in self-efficacy is one of a multitude of factors that is associated with depression outcomes. However, there was insufficient evidence of all criteria necessary to establish mediation. Further research is required with more rigorous designs that enable statistical analysis of mediation, and consideration should be given to reviewing the role of self-efficacy as a potential moderator of treatment outcomes.

Currently, there is insufficient evidence to indicate that improving self-efficacy should become a central tenet of CBT intervention.

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Service Improvement Project:

Transition to Adulthood: Evaluating a Pilot Implementation of Multimedia Person-Centred Plans for Individuals with Learning Disabilities

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(see Appendix C)

Introduction

People with learning disabilities (PWLD) represent a population who are likely to experience multiple transitions, changes and losses in their lives (Crickmore & Dearing, 2007; Hewitt, 2006; Hussain & Raczka, 1997). Holding a clear narrative and sense of self through these changes may present a challenge to both the individual and services supporting them, and the individual's social history and connections between their past and present are often overlooked (Hussain & Raczka, 1997; Meininger, 2006). PWLD often rely on those around them to note and share key information to make their narratives known (Grove, 2007). However, knowledge that sits outside of more 'functional' information is often exchanged informally between carers, family members and PWLD; thus often goes undocumented (Hewitt, 1997; Meininger, 2006) and is easily lost across transitions.

One transition that can be particularly challenging is that from adolescence to adulthood (Crickmore & Dearing, 2007), in which one is expected to move from being a 'protected' child to an autonomous adult (Beresford, 2004; Hudson, 2004). This is often evidenced by independent achievement in important areas such as work, living situation, and social connection. This can be more complex and challenging for PWLD, for whom the transition is typically of longer duration and broader scope, and may involve a narrowing (rather than broadening) of experiences. Independence and separation from parents can be delayed, problematic, and require additional support (Florian, Dee, Byers, & Maudslay, 2000; Hudson, 2003; Stewart, Stavness, King, Antle, & Law, 2006; Ward, Heslop, Mallett, & Simons, 2003).

For young PWLD, transition to adulthood is often two-fold; capturing both transition from child to adult status, and moving from child to adult services due to on-going need (Beresford, 2004; Heslop, 2002). These two processes do not necessarily coincide, i.e. people may not be more independent when they move to adult services.

Research has demonstrated that these transitions are difficult for PWLD and their families; marked by discontinuity, frustration, anger, stress, confusion, and uncertainty (Beresford, 2004; Heslop, 2002; Hudson, 2006; Smart, 2004). While numerous legislative frameworks and strategies, as well as feedback from PWLD and their families, emphasise that service transitions should be planned well in advance with the full involvement of PWLD/families (Conlon, 2014; Kelly, 2013); in reality planning is often done reactively or at short notice with partial, if any, individual involvement (Beresford, 2004; Cope, 2003;

Heslop, 2002). Those with complex needs and significant communication difficulties are most at risk of being excluded and "falling through the gap" between services (Dee & Byers, 2003; Hudson, 2006; Morris, 2002; Singh, 2009; Ward et al., 2003). Subsequently, transition planning can neglect the key concerns of PWLD themselves, such as their preferences, aspirations, social connections, work, and leisure (Beresford; Heslop, 2002; Hudson, 2003; Kirk, 2008; Morris, 2002). Taking a person-centred approach to transition planning is crucial to preserve PWLD's uniqueness and address their key concerns while supporting them to move towards adulthood (Dee & Byers, 2003; Hudson, 2006; Stewart et al., 2006)

Person-centred approaches put the individual at the centre of all planning about them; promoting their independence, inclusion and empowerment (Dowling, Cowley, & Manthorpe, 2006; Parley, 2001; Sanderson, 2007). Person-centred plans should be owned by the individual and those closest to them, and are most effective when routinely monitored, implemented within a culture committed to person-centred working, and shared across services (Kelly, 2013; Kendrick, 2004; Robertson et al., 2007). Person-centred work, such as life story work, can help to build a holistic picture of an individual's life, capturing important aspects of their personal and social history (Hewitt, 1997, 2000). This provides individuals with an opportunity to share stories of ability and encourages a positive self-perception (Nunkoosing & Haydon-Laurelut, 2013), whereas accounts written by others may be more negative and narrowly focused on disability, impairment and routines (Grove, 2007; Morris, 2002; Rappaport, 1995). Person-centred work can empower individuals and promote relationships with staff, by strengthening sense of identity and providing an aid to self-advocacy and decision-making (Hussain & Raczka, 1997; Meininger, 2006). This is particularly important at times of transition, as whilst services can provide a transfer of clinical information, person-centred work supports individuals to manage the emotional aspects of change; validating their previous experiences while highlighting what remains important to them (Hussain & Raczka, 1997).

In recent years, person-centred planning has moved into the technological arena, with the rise of 'multimedia profiling' and 'multimedia self-advocacy'; i.e. using a variety of mediums, such as text, graphics, photographs, video, and audio, to capture an individual's abilities, choices, needs and preferences. A Mencap pilot project (Cavet & Grove, 2005) found that when used with individuals with profound and multiple learning disabilities, multimedia person-centred plans (MPCPs) achieved multiple positive outcomes. These

included enjoyment, greater ownership of their own records, enhanced staff understanding of individual needs, improved information sharing, and improved self-advocacy. Other services have reported that using MPCPs encouraged PWLD to engage in review meetings, brought their aspirations and needs to the forefront, and provided another 'language' to engage people with, promoting greater equality between PWLD and carers (British Institute of Learning Disabilities, n.d.; Ladle, 2004). Case studies indicate that individuals gradually increase their skills and confidence in using MPCPs over time (Grove, 2003). However, Mencap highlighted the need for increased resources (e.g. staff time and equipment) to implement MPCPs, as well as the potential for misuse and invasion of privacy.

Service Context

Within Bristol, children and young adults with complex disabilities and/or special educational needs are supported by a 0-25 Integrated Service, established to ensure flexible, holistic, person-centred working across social services. The service aims to give PWLD more control over their lives and decision-making; smoothing the process of planning for adulthood by working with eligible individuals until the age of 25. Health and therapies services are provided by separate child and adult services, including the Specialist Services for Children with Learning Disabilities (SSCLD) and the adult Community Learning Disabilities Teams (CLDTs).

A pilot package of RIX Wikis was purchased by the Integrated Service. Wikis are password-protected MPCPs developed by RIXMedia and owned by an individual and their family, although they can be shared with others (in full or part) via email invitation. They have been used elsewhere as person-centred plans, health action plans, records of achievement, and curriculum vitaes (RIXMedia, 2015)

Bristol became one of ten local authorities to adopt Wikis, establishing a steering group (SG) to guide their pilot implementation. The SG is chaired by members of the Integrated Service and attended by representatives from local specialist schools, SSCLD, parent-carer groups, and smaller local services. Three specialist schools became Early Adopters (EAs); receiving training before introducing Wikis to a small number of pupils and families during the 2015-2016 academic year, particularly those at points of transition. The current project was the only planned evaluation of the pilot, and focused on individuals transitioning onwards from school due to the unique challenges faced in moving from child to adult services.

Aims

This service improvement project aimed to evaluate the pilot implementation of Wikis with PWLD transitioning onwards from specialist schools in Bristol. See Table 1 for a list of research questions.

Table 1.

Research questions.

Questions
With a focus on the transition period after leaving school:
1. How useful do clients, families and professionals find MPCPs developed by/with a client and their family to hold their story?
2. How are PWLD/families using MPCPs in transition onwards from school?
3. How willing are PWLD/families to share their MPCPs with others?
4. How sustainable are MPCPs?
5. What information about an individual's life do clients, carers and professionals believe is important to be included in an MPCP?
6. How do MPCPs complement other information-sharing systems?

Method

Ethical approval was sought from the University of Bath Ethics Committee, local authority, participating schools, and CLDT service provider (Appendices D-G).

Design

A predominantly qualitative design was adopted, seeking feedback from PWLD, families and professionals via semi-structured interviews, focus groups, and written questionnaires 4-6 months after the first academic year of the Wikis pilot ended.

A small amount of contemporaneous quantitative data was also collected from PWLD and their families using a written questionnaire.

Participants

PWLD/parents. The project design was primarily service-user focused, thus aimed to recruit 8-10 school leavers (aged 16-19) from EA schools and their families. However, as schools selected a small pilot sample and Wikis introduction was delayed, only 4 PWLD/families were able and willing to participate: two PWLD/parents each from two EA schools. Two PWLD had significant communication difficulties and lacked capacity to

consent to participation, thus parents were the primary Wiki users and participated instead. The remaining two PWLD had milder disabilities and demonstrated capacity to consent, though also agreed to their parents' involvement.

Upon meeting with families, it emerged that only two had a Wiki, whilst the others had only been informed about them, thus creating two distinct groups: those with a Wiki and those without.

Due to low participant numbers, the design was amended to include the views of staff from EA schools and adult services, to gain a broader perspective of the Wikis pilot.

School staff. Staff from EA schools (including SG members) were invited to participate in a focus group of 6-10 staff. However, due to unforeseen circumstances only one attended.

Staff from adult services. To explore the long-term implementation of Wikis, seven professionals from adult CLDTs, who sat on a transitions working group, were recruited for a focus group.

Materials

All materials were developed by the research team, who have experience of working with PWLD, with two currently working in Bristol LD services. Materials were developed based on the team's own experiences and a review of literature regarding benefits and challenges of introducing new initiatives, technology-based tools, and person-centred planning. The materials for PWLD were shared with a service user group, who provided helpful feedback regarding their format, accessibility and planned delivery, resulting in some refinements.

Written questionnaire. A brief written questionnaire was developed regarding how PWLD/parents shared information about themselves, for completion (i) prior to creating their Wiki, (ii) upon leaving school, and (iii) at 4-6 month follow-up; to capture any changes following the introduction of Wikis (Appendix H). However, as all participants reported minimal engagement with their Wikis across time points, comparison was of little value thus is not reported (see Appendix I).

Interview schedules. Semi-structured interview schedules were developed for (i) interviews with PWLD/parents (converted to questionnaires for parents unable to attend interview or whose child was being interviewed), (ii) focus group of school staff, and (iii) focus group of CLDT staff (Appendices J-L). Areas explored included issues around child to adult service transitions, the process of establishing Wikis, Wikis support received/offered from schools, benefits and challenges of using Wikis, facilitators and barriers to Wikis implementation and integration into services, suggested improvements, and long-term use of Wikis.

Procedure

Table 2 (below) summaries the multiple arms of this project. All data was collected by the lead researcher.

PWLD/parents. PWLD from the Wikis pilot and/or their parents were provided with information about this research and invited to participate (Appendices M-P). Those who provided informed consent completed the written questionnaire. This was completed near the end of the school year, thus was not recompleted before leaving school as planned.

Families were contacted approximately 4 months after leaving school and met with the researcher to recomplete the questionnaire and be interviewed. PWLD chose whether to be interviewed independently or alongside their parent. Where the PWLD was interviewed, parents completed the equivalent questionnaire. Of the two parents who agreed to be interviewed, one could not attend and completed the questionnaire instead. Where the PWLD did not have a Wiki, they were given verbal information and shown a demonstration, and questions were adapted accordingly. All participants were debriefed (Appendix Q).

School staff. School staff were informed about the research and invited to a focus group (Appendices R-S). Due to unexpected circumstances only one staff member could attend, thus questions were delivered as an interview.

CLDT staff. CLDT staff were informed about the research and invited to attend a focus group (Appendices S-T), following the semi-structured interview schedule.

Table 2

Participant groups and methods of participation.

Participant group	Participant identifiers*	Wikis involvement	N	Demographic information	Method of participation
a) PWLD/ parents with a Wiki	Pa2 Pa4	Had a Wiki	2	Mothers of PWLD	Both completed brief written questionnaire; 1 parent interviewed face-to-face; 1 parent completed interview in written questionnaire format
b) PWLD/ parents without a Wiki	Pu1 Pa1 Pu3 Pa3	Didn't have a Wiki	2 PWLD + 2 parents	PWLD: Females aged 16-19 Parents: Mothers of PWLD	All completed brief written questionnaire; 1 PWLD interviewed independently while parent completed written questionnaire format; 1 PWLD + parent interviewed together
c) School staff	SS	Wikis lead for EA school; member of Wikis SG	1	Male school teacher	Interview
d) CLDT staff	CLDT1 CLDT2 CLDT3 CLDT4 CLDT5 CLDT6 CLDT7	Not yet involved with Wikis	7	1 male and 6 female staff members from nursing, occupational therapy, speech and language therapy, physiotherapy, creative therapies	Focus group

**Pa = Parent; Pu = Pupil*

Analysis

Given the variety of data collection methods used, the data corpus consisted of qualitative data sets in several different formats: transcripts of interviews conducted with a parent with a Wiki, a PWLD without a Wiki, jointly conducted with a PWLD without a Wiki and their parent, and conducted with a member of school staff; transcript from CLDT focus group; and written questionnaire feedback completed by one parent with a Wiki and one parent without a Wiki. The amount of data contained within each data set varied considerably. Predictably, the focus group undertaken with multiple staff members generated the most data, followed by the interview conducted with a school staff member, which was perhaps unsurprising given the vast experience and knowledge the staff member had to share as an SG member, school representative, and having received feedback from parents. Regarding PWLD/parent data sets, those who were interviewed provided considerably more data than those completing written questionnaires, as would be expected

given that the semi-structured nature of interviews enabled the lead researcher to ask additional follow up questions and probe for more details where responses were brief. Due to the different volumes of data generated by each participant group, it was deemed most appropriate to initially analyse data separately by group, to ensure that the views of all participant groups were given equal attention and consideration during analysis, and that the smaller volume of data provided by PWLD/parent participants was not overshadowed by the larger volume of data provided by staff. To overcome the difficulties of having data in both transcript and questionnaire format, all data sets were treated as written transcripts. This was deemed appropriate as all data sets, regardless of collection method, followed a question-and-answer format, albeit with additional prompts within interview transcripts.

Thematic analysis was conducted using Braun & Clarke's (2006) method, which can be applied flexibly across data collected using a variety of methods and formats. Data was transcribed then read and reread multiple times before initial codes were generated, which were further refined as they were collated into themes. The lead researcher identified patterns and themes of relevance to the research aims, which were reviewed and refined several times. The data from each participant group was analysed separately and thematic maps were produced to visually summarise the findings (see Figure 1), following which superordinate themes were identified across participant groups from all subthemes (see Figure 2).

A theoretical/deductive approach was taken to coding, driven by the research aims and questions, i.e. highlighting themes related to Wikis use, areas of difficulty, and suggestions for improvement. Data was analysed at the semantic level, i.e. themes served to summarise the explicit content of participants' responses, which were assumed to represent their own experiences and ideas (an essentialist/realist approach).

The lead researcher has a background of working with PWLD and a strong ethos of working in a person-centred way to empower PWLD and their views; and undertook all data collection and analysis. An independent second rater (with limited experience in the field) was recruited to ensure that themes were truly representative of the data, and not skewed by the researcher's own views. The second rater reviewed the full data set at the level of thematic mapping, reviewing data from one participant group in greater detail to ensure good agreement at all levels of analysis. There was good agreement between raters regarding codes and themes, although after discussion some larger themes were split and some

renamed to better represent their content. Another member of the research team reviewed codes and themes at several points throughout the process and reviewed the final thematic maps, again helping to rename some themes. It is from discussion with the second rater and research team member that cross-cutting superordinate themes were identified across participant groups.

Results

Themes within Participant Groups

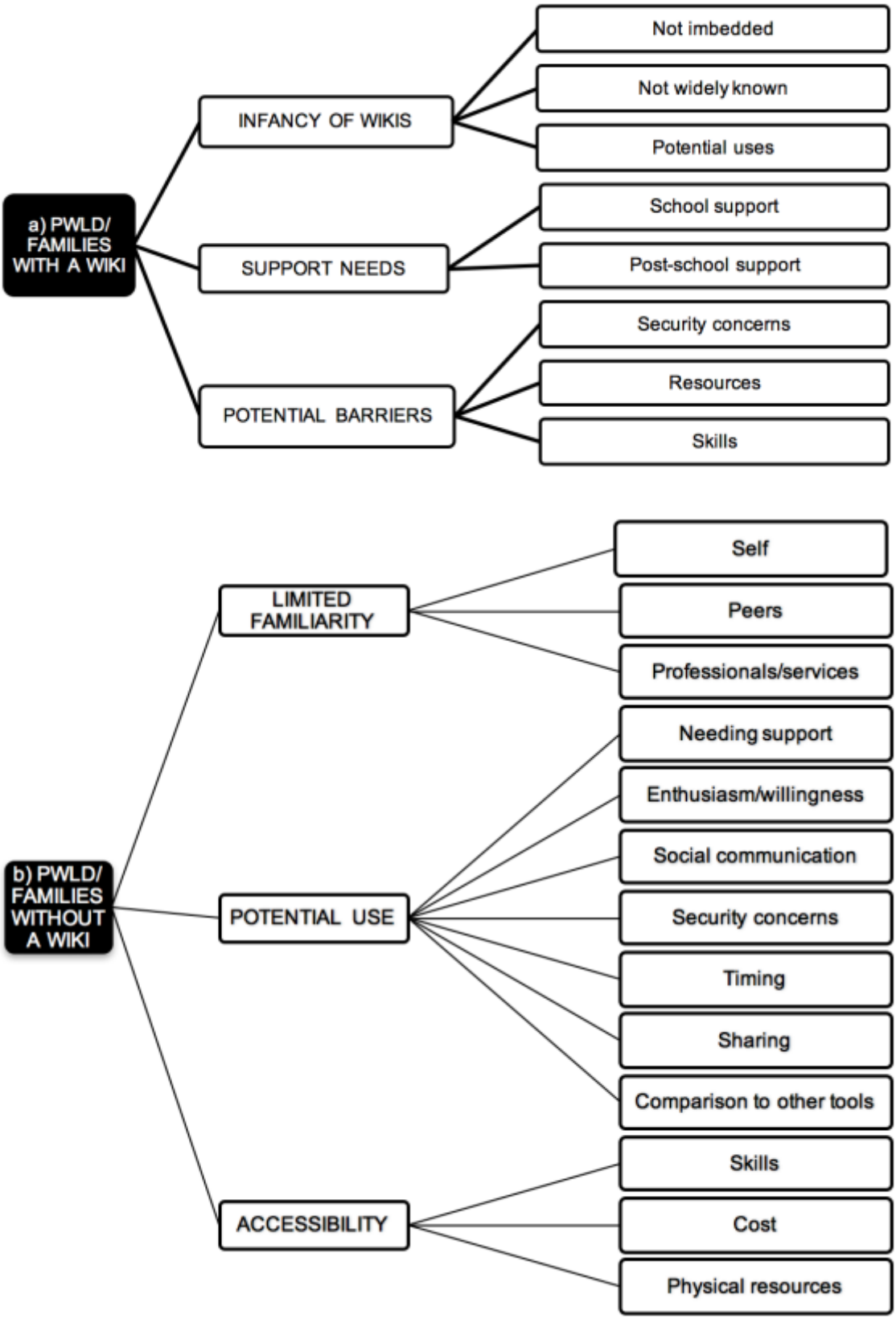
A brief description of the main themes identified within each group (Figure 1) is outlined below; see Appendix U for a full descriptive account of subthemes by stakeholder group.

a) PWLD/parents with a Wiki. Although data was collected from two parents, most was provided by the one parent who attended an interview.

Data was organised into three themes: *Infancy of Wikis* captured the infancy of the pilot and thus Wikis not being fully embedded, widely known, or fully utilised; although participants recognised their potential uses. *Support needs* captured the amount of support PWLD/parents had received from school around their Wikis, while noting on-going support needs. *Potential barriers* included security concerns, availability of resources to access Wikis, and ability/skill to use Wikis.

b) PWLD/parents without a Wiki. Participants discussed themselves, peers, and professionals/services having *Limited familiarity* with Wikis. Families discussed the *Potential use* of Wikis: reporting willingness to use and share Wikis; preferring their multimedia format above other tools; and believing Wikis could aid social communication. However, they highlighted concerns around information security and needing information and support to establish Wikis; and noted that the timing with which Wikis were introduced was important. Finally, families identified issues which may impact on the *Accessibility* of Wikis, namely cost and the individual's skills and resources.

c) School staff. The staff member had been involved with implementing Wikis across the school and was a SG member, thus his comments were not necessarily restricted to only pupils leaving school.



(continued overleaf)

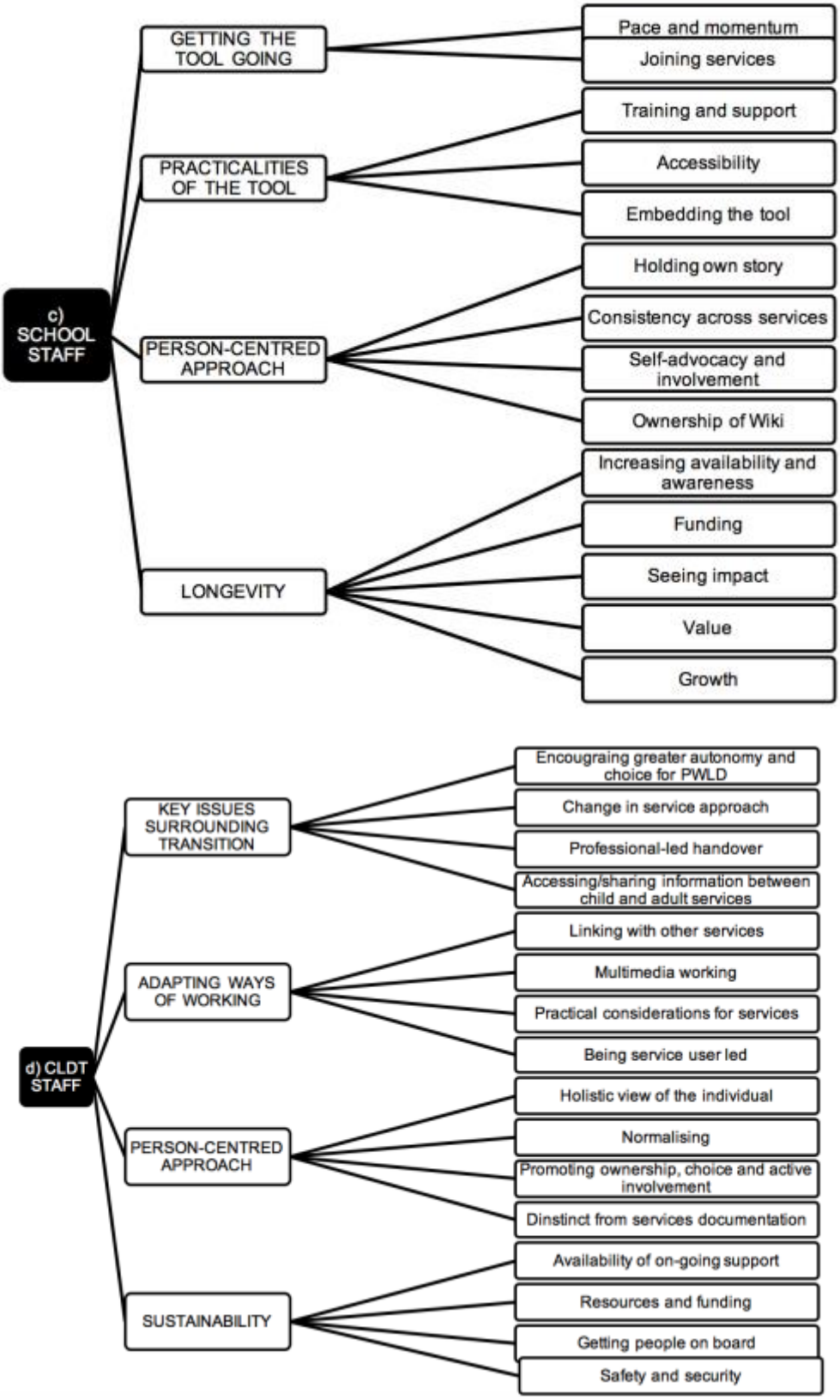
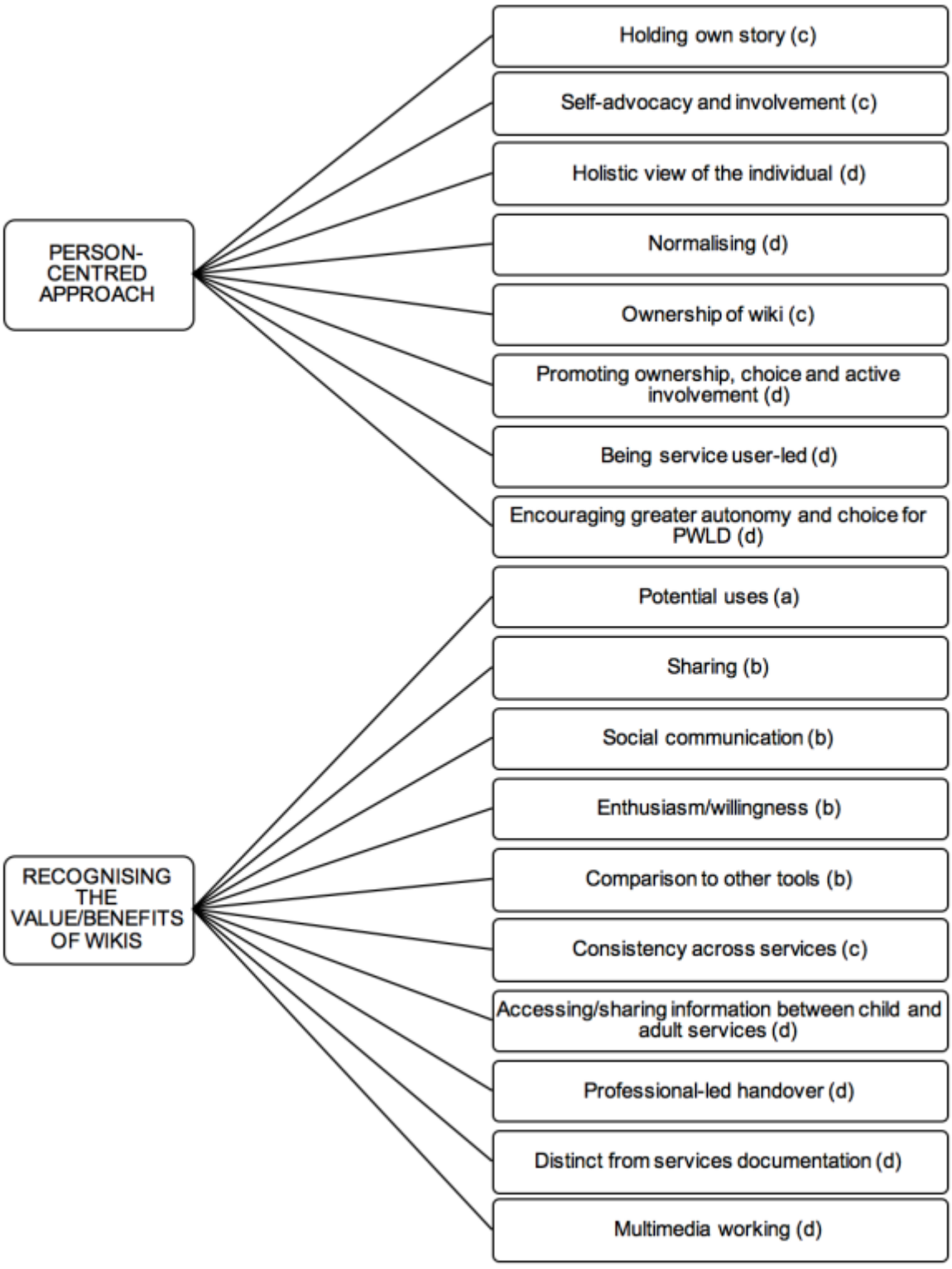


Figure 1. Thematic maps of data from each participant group: a) PWLD/parents with a Wiki; b) PWLD/parents without a Wiki; c) school staff; d) CLDT staff. Themes are in capital letters; subthemes in lower case.



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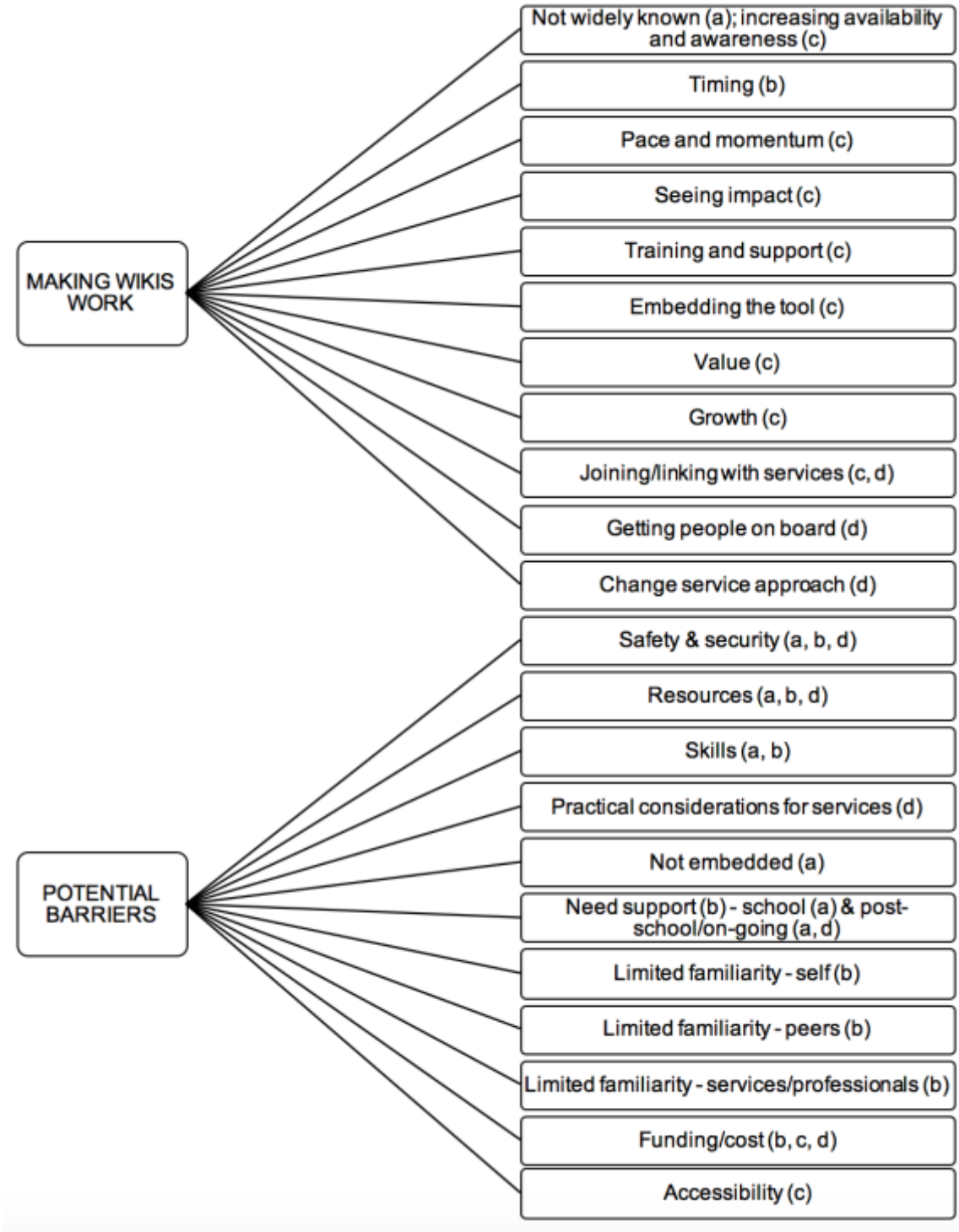

Figure 2. Thematic map of superordinate themes. Themes are in capital letters; subthemes in lower case. Parentheses indicate participant groups subthemes were drawn from: (a) PWLD/parents with a Wiki; (b) PWLD/parents without a Wiki; (c) school staff; (d) CLDT staff.

Four main themes were identified. *Getting the tool going* captured the pace and momentum of Wikis progress, and the benefits and challenges of bringing services together. *Practicalities of the tool* encapsulated issues around Wikis' accessibility, how they were becoming imbedded within school, and training/support provided. School staff spoke of the *Person-centred approach* that Wikis encourage; promoting consistency, self-advocacy and involvement, and helping PWLD to hold their own story. Finally, issues related to *Longevity* of Wikis included increasing availability and awareness and demonstrating the impact and value of Wikis.

d) CLDT staff. This group described several *Key issues surrounding transitions*, including the change in service approach and encouraging PWLD's autonomy and choice. They discussed *Adapting ways of working* to incorporate Wikis into their work, such as being service-user led and taking a multimedia approach. They too spoke of a *Person-centred approach*, believing Wikis promote a holistic view of the individual and serve a distinct function to service documentation. The final subtheme was regarding the *Sustainability* of Wikis, which included the need to get other services on board with Wikis and providing on-going support to users.

Superordinate Themes

To explore cross-cutting themes across stakeholder groups, the subthemes from all groups were analysed and grouped into four superordinate themes (Figure 2). Example quotes from each theme and subtheme can be found in Table 3.

Person-centred approach. Multiple school staff and CLDT subthemes highlighted the person-centred approach of Wikis. They referred to Wikis helping an individual to hold their own story and the importance of individuals taking ownership of their Wiki and leading their use, with services needing to be responsive. Staff spoke of Wikis providing a holistic view of the individual and being normalising, given that technology-based tools are so prevalent among young people and that PWLD may be more skilled at using them than professionals. They also discussed the potential for Wikis to promote self-advocacy, autonomy, choice, and active involvement.

Interestingly, this theme did not include any subthemes from PWLD/parents. This may reflect services' emphasis on taking a person-centred approach, while PWLD/parents

may be more concerned with the practical aspects and implications of Wikis on their everyday life, better reflected within the next two themes.

Recognising the value/benefits of Wikis. All participant groups recognised ways Wikis might be valuable and their use beneficial.

Subthemes from PWLD/parents referred more to the use of Wikis in daily life, e.g. improving social communication by helping others to understand the PWLD's strengths and difficulties and get to know them; exploring common interests with peers; and providing a place for information to be uploaded in an accessible way for the PWLD to review. PWLD/parents reported their enthusiasm for Wikis and willingness to share their Wikis with known others, while noting the importance of not sharing with strangers. They discussed potential ways of using Wikis, e.g. in review meetings. While they did not believe Wikis would encourage sharing extra information beyond other tools, they felt their multimedia format and password protection was preferable.

In contrast, subthemes from school and CLDT staff focused more at the service level, e.g. suggesting how Wikis may increase cross-service consistency, and identifying current issues around professional-led transition. Staff did not feel that Wikis would create change in the latter issue, but instead serve a distinct function to the documentation completed by professionals. Like PWLD/parents, staff felt the multimedia format of Wikis would enhance their understanding of clients beyond traditional documentation.

Making Wikis work. This theme encompassed factors which might encourage the success of Wikis implementation, with most subthemes drawn from school and CLDT staff.

Issues raised by PWLD/parents include broadening awareness of Wikis (also mentioned by school staff), both across services and also by expanding the roll-out of Wikis. They also discussed the timing with which Wikis are introduced, stating that Wikis would be best introduced earlier within school, and would be particularly useful when multiple professionals are involved.

Staff referred to the need for Wikis to become embedded in school and other structures, and how important pace and momentum are to ensure progress. Staff noted the importance of joining services together around Wikis, and services perhaps needing to

Table 3.

Illustrative quotes from each subtheme.

Superordinate theme	Subtheme	Participant group	Illustrative quotes *LR = lead researcher*
Person-centred approach	Holding own story	School staff	**SS:** I think the general fear in parent is that kids at our school have iPads with lots of information, books, detailing what they had on it and they were worried that all information is going to disappear. Obviously the ipad comes back to school when they left, so a lot of parents, concerned parents, were coming in the learning about the new system, understanding you can have video and pictures and documents all in the same place and they can tie everything together.
	Self-advocacy and involvement	School staff	**SS:** I say, supported some of their EHCP's which they've had recently, so they've come up into their EHCP meetings and showed bits of their wikis about how well they've done and it's been a way of celebrating achievement, but also just a way of detailing some of the likes and dislikes of the child that, some of them the parents realised and some of them they didn't realise. **SS:** For the children, because a piece of paper means nothing to them, but something that's interactive up on the screen that they can see, they can view, they can be a part of, it gives them the ownership of it. And that's what's worked really well I think, it's nice to see you know, youngsters coming to an annual review or EHCP and having something to show and something that's meaningful to them, and not just sitting with other professionals talking about them but not actually involving them.
	Holistic view of the individual	CLDT staff	**CLDT1:** It's making them a whole person isn't it, and what's important to them, what makes them tick.. your dog, your hamster.. **CLDT5:** Many of our people actually have deteriorating conditions, um, and so it must be really nice for them to say this is what I *used* to be able to do, but that might be hard for some of them as well, so there's that aspect. **CLDT5:** It'd be really nice to be able to show their personality in different settings. Cause you know, some of them are fab, people still go out and you know, going on boats, or a plane or walking in woodlands, hanging around outside in the rain and things. It's that side of things that would be really nice to show, because you don't see that when they're sitting in front of you.
	Normalising	CLDT staff	**CLDT7:** I think it's quite normalising. In terms of, you know, young people, this is how they communicate.. This is their life is online. Actually, this is how everybody communicates, in picture and video and all of that kind of thing, and that's how they share their lives. You know, I mean, how many of us walk into a room with a great big paper report and say 'this is me'? We don't do we. But we might come in after the weekend and say "have a look at what I've done this weekend", you know, show people a few pictures or whatever. you know, I went to this concert, here's a clip, or have you seen my new dog. We do that don't we, that's what we do. **CLDT1:** It's transition isn't it, getting them to understand a bit more about being an adult and what that possibly might mean. Ownership of self, and being able to make decisions. It's a rite of passage that most people go through in the normal spheres isn't it, and this is enabling them to do it within learning disabilities. **CLDT5:** I'd need them to teach me how to load it! And actually, that breaks down the barriers that they know more than you, and that's quite fun.
	Ownership of Wiki	School staff	**SS:** Actually it's all very well us driving it, but actually it's the parents are the end of the day that are the biggest drivers, or the carers, who want these things in place**.** **SS:** So going forward, the idea will be, once it's set up and running, is to get as many parents in, give them training, and then obviously explain how beneficial is, and that eventually we'd like them to take it on.
	Promoting ownership, choice and active involvement	CLDT staff	**CLDT1:** I think it's a really good idea and definitely nice to see that the service user is taking the ownership of it and sharing the information with who they wish, I think that's really nice. **CLDT7:** It getting them to thinking differently about their needs and what they want in the future, rather than it being a passive process it's an active process.

	Being service-user led	CLDT staff	**CLDT6:** If the person wants to continue to use that tool then we'd have to make sure that we pulled out the stops to ensure that we can add to it and solve all those other issues. We've got our technical department we can contact and stuff. **CLDT4: I**t's a brilliant way of finding out their priorities, yeah. And then where do we fit in, rather than making them fit with us.
	Encouraging greater autonomy and choice for PWLD	CLDT staff	**CLDT4:** ..empowering that young person to think about what's *important to them*, not want everything thinks they should have, but actually what is important.. and supporting them to help make the decisions.. rather than saying "I think you need this, therefore that's what's going to happen".
Recognising the value/benefits of Wikis	Potential uses	PWLD/parents with a Wiki	**LR:** What is good or helpful about Wikis? **Pa4:** Hard to say since we don't use it **LR:** Has the wiki been used in any way to help think about [name's] goals and plans for the future? I don't know what you've done in it so far.. **Pa2:** Well, yeah, I was probably.. getting to that, and I did think I'd started that, really; literally I'd just done his name, and I think, I mean, we might've just started to do goals. **LR:** What do you think would be helpful about showing it to them [medical consultants]? **Pa2:** Well, and, to get, you know, especially if you had, sort of, videos on there, of your child doing something specific to do with that consultant would be really useful. Because, you know, they see them for, you know, 10 minutes in a consultation, and they might be on a really good day!
	Sharing	PWLD/parents without a Wiki	**LR:** If you had one, who do you think you'd show it to? **Pu1:** I'd show it to my brother, my dad.. and my both nan and granddads. **LR:** Who wouldn't you show it to? **Pu1:** Strangers. **LR:** Who do you think you'd show it to? **Pu3:** Umm.. my mate, I'd say my boyfriend but now, I'll just say my mate. **LR:** Would you show it to new teachers at college? **Pu3:** Yeah.
	Social communication	PWLD/parents without a Wiki	**Pa3:** I think, if I had one myself, it's just to show my friends this is who I am, and if you don't like me just go. It's just to show who you are! **Pa3:** You can do it for jobs, like, show them when you go for a job interview, show them, if they ask you a, this is what I can do. And you can show them. **Pa3:** I think for both of them [son and daughter], yeah. I think it would be helpful for both of them, cos she could always put her rugby pictures on, and she can say to her friends "well I go to rugby, what do you do?". Like, swap information. 'Cause like, just say, right Mrs Smith and Miss Jones shares the same interests. Well Mrs Jones likes rugby, Mrs Smith likes rugby, we'll just compare - I'm a Bath supporter, I'm a Bristol supporter, well.. maybe not! A bit of banter.
	Enthusiasm/ willingness	PWLD/parents without a Wiki	**Pa3:** If it was my job, I'd recommend it to all the students.
	Comparison to other tools	PWLD/parents without a Wiki	**LR:** What would be different about, so you've got some of that information on a care plan already; what would be different about having it on a wiki? Do you think that would be the same, or would it be better in some ways, or.. **Pa3:** I think it would be better, cos then they can read.. see what she can do, and what she struggles with. **LR:** So would you just have writing, or have videos.. **Pa3:** I'd just have pictures. If that was mine. **LR:** Yeah? And why would it be better on a wiki than on a care plan?

			Pa3: Why? Cos then, with a care plan, if it gets into the wrong hands then somebody can always read it.. it can get into the wrong hands.
	Consistency across services	School staff	**SS:** I had a pupil who was in hospital and I went in and spoke to the teacher there and she was like "oh, I've been doing this and that with him, and", not actually realising that he was blind and things like that. And that information is really, cos then actually when I explained it to her, showed her some clips of him on the wiki, the way he works, she completely changed his schooling and actually he had some really nice lessons while he was in hospital and went back to school and was able to integrate himself back into school quicker because of it. **SS:** Particularly for the leavers, it's just safe in the knowledge that the same skills and the same expertise that the school staff here have worked on, you know, those things were still happening, can happen in other settings, that the approaches were the same, that it made transition more streamlined, more easier.
	Accessing/sharing information between child and adult services	CLDT staff	**CLDT7:** We don't always get involved in the transition early enough.. Very often it's the last term.. and then the school closes over the summer so people are left with referrals coming into us.. but people we need to liaise and link with aren't there because they're away on holiday. **CLDT5:** The eating and drinking guidelines sometimes come across, sometimes we have to chase them, which is why we've actually had some meetings with our children's services colleagues and suggested that when people are leaving school, whether they're being referred on to another service or not; whether they're staying in Bristol or not, any relevant documents get sent to the GP and then if they come up in you know, six months or two years' time, at least then we can access those, that information from the GP, rather than trying to get it from children's services who have archived it, so someone's got to go and find it from a loft somewhere and all of those people have left and nobody knows who they were.
	Professional-led handover	CLDT staff	**CLDT5:** We establish eligibility early on, so when it is relevant to hand over, it's just a professional to professional handover.
	Distinct from services documentation	CLDT staff	**CLDT6:** I don't expect they'd have the detail on them, sort of, would you be putting more positive information on there maybe, rather than well actually these are the sort of behaviours that are really difficult, and these are the risks. It looks to me like it's a tool that you'd be putting more positive stuff on, maybe, rather than stuff that challenges services, so I don't know that it would have adequate detail on it.
	Multimedia working	CLDT staff	**CLDT7:** They say a picture's worth a thousand words.. **CLDT6:** I'm just thinking from a teacher's point of view in school, that there may be, to be using it with people who do have the really complex needs, communication needs, because then you can give a visual representation of what activities people enjoy and stuff.
Making Wikis work	Not widely known; Increasing availability and awareness	PWLD/parents with a Wiki	**Pa2:** I mean no, I haven't had any consultant ask me, or GP, or any, I haven't had anybody involved in [name's] care ask me about a wiki. **Pa2:** Going into adult services they've probably never heard of a wiki. **LR:** Any other reasons why you think you've not used it very much? **Pa2:** I think, probably because it is a bit in its infancy and we're all a little bit guinea pigs, not a lot of people know about the wikis and it's not really widely.. you know, in the medical profession and stuff, it's not like your, er, passport.. everybody knows about children's passports and.. yeah, so I think, yeah, probably because it's in its infancy.
		School staff	**SS:** I think what we need to do, we've got 1500 of them, we need to get as many used as we possibly can, even if it's children who start it and then drop off, at least then we've had a go and they've been given the opportunity to use it. **SS:** Word of mouth is very, very powerful. So once they see the positive side of it, it gets round to other parents and you know, it's not long before other parents start asking questions about why their child hasn't got one and actually they want one, and that's a really important thing.
	Timing	PWLD/parents without a Wiki	**Pa1:** I mean for me, I think this would've been.. cos at the moment, [name] doesn't really have many people involved, you know, in her life, in terms of external people. So for me, had that have been around when she was younger, when, you know, we were hospital visits all the time, all those different things, then that would have been really, really helpful I think. **Pa3:** I would have introduced it..

		Pu3: Before we left school.. early.. right from the beginning.
Pace and momentum	School staff	**SS:** The process has been a bit slow for our liking, but I understand why, because we obviously wanted all facets of, you know, provisions involved from the early stages… Into the two year pilot we obviously lost quite a lot of time early on. **SS:** It's about momentum. At the moment we've got that momentum and I think we need to keep pushing it.
Seeing impact	School staff	**SS:** Something I do need to look at is the continuing impact of wikis, for those students who are obviously not with us any more. Obviously from inside the school it's quite clear to see it's had an impact on other areas, but yeah that is on my big to-do list, I will go and look at the impact because that is something that parents are concerned about is that obviously we're very passionate about it, but our passion might not be shared with other settings, and that's something, again, that other people have expressed as well; that everyone needs to be on board with it, not just us pushing.
Training and support	School staff	**SS:** *[We]* provided open house training for parents who are just generally interested in the wiki, not necessarily just the parents who were going to be having wikis, actually just to see how many parents were interested, and certainly at secondary we had a lot of interest. **SS:** I held some open, not open, training sessions, and we did do a twilight session, but obviously teachers are so busy they weren't able to attend it, so we did do a staff meeting based on wikis and introduced them, showed them to staff… We had a couple of training sessions.
Embedding the tool	School staff	**SS:** Now we're working and implementing wikis into the normal school life of the children. **SS:** Every child *[in the school]* will have a wiki with basic information in it by the end of this month. And then the idea is that part of their assessment, at the end of each assessment cycle, any changes to communication profiles or skills or independent skills they need to showcase going forward will be added to it; up to date intimate care plans and processes in place for anything to do with that particular child will be there.
Value	School staff	**SS:** We showed them to staff and.. apart from the "well this is going to make more work for us" kind of argument, um.. you know, what's this going to replace, and once we'd identified all the pros, you know, all the teachers got on board quite quickly. And actually realised in terms of providing loads of transition paperwork and all that sort of stuff, actually this is going to really help the children move between classes very easily, but also for the leavers all that information being in place. **SS:** I do think you almost need to see a few. I mean you don't want to see children in hospital or anything like that, but they *[hospital staff]* almost need to see it in practice to see, understand the benefit of that, and just giving them the information just isn't enough, they need to understand the importance of it I think.
Growth	School staff	**S:** We've made all the wikis, big Wikis, so it has the potential to grow and grow and grow, and grow with the child throughout the school. **SS:** We're building in things like City & Guild and Enterprise projects and wikis will be part of that, so they can take skills to show they can do and hopefully use it to form part of their lives going forward which is really, really important for them
Joining/linking with services	School staff	**SS:** So what's worked well is probably our relationship with Rix generally, and the steering group has been useful because it is tying in a lot of different things and getting people thinking about different areas, um, sort of reigning people like me back who are a bit gung ho, a bit let's get on with it and get it done, to oh we need to think about this, and make sure that people understand that, it is a system that everybody needs to be involved in.
	CLDT staff	**CLDT5:** It would be nice if we could tap into, like, if the children's services are quite familiar with the,, if we could have a link.. **CLDT1:** A link back in. Or if not, our information governance people have some idea of who to link in with.
Getting people on board	CLDT staff	**CLDT6 – I**t's very dependent on how much the schools educate the family about using this as a tool to continue on once they've left school. I guess that to me would be the biggest message; If schools are using it with individuals, they need to have somebody else signed up to it as well, so that it's a tool that is going to be funded and given the right equipment once that person leaves school, otherwise it is just going to be a tool literally for use at school.
Change service approach	CLDT staff	**CLDT3:** We need to rework.. also I guess their expectations from services. Especially the parents, you know, *[their expectation]* is that you're involved and get quite annoyed if they find, actually, you do a piece of work then start to close them.

			CLDT1: Yeah, it's a very different way of working, because you do pieces of work and then you close, whereas um.. **CLDT5:** and there's not a doctor, a paediatrician, that's holding it and coordinating
Potential barriers	Safety and security	PWLD/parents with a Wiki	**Pa2:** I just think, erm, it's quite you know, who can actually see your wiki and all this data protection, I think that does, sort of, put some people off a little bit, you know..
		PWLD/parents without a Wiki	**Pa3:** Why? Cos then, with a [written] care plan, if it gets into the wrong hands then somebody can always read it.. it can get into the wrong hands. **LR:** Who wouldn't you show it to? **Pu1:** Strangers.
		CLDT staff	**LR:** In terms of what you think would need to be in place for your team to work effectively with wikis, what sorts of things need to be thought about? **CLDT1:** Information governance. **CLDT7:** Information governance and data transfer. **CLDT5:** And advice for the young person on, you know, the young person is now an adult, so education on computer safety, risks, risks of sharing the password.
	Resources	PWLD/parents with a Wiki	**Pa2:** We live a life that's different to other people, and probably, priorities are different as well. **Pa2:** I can go on it on our computer, yes.
		PWLD/parents without a Wiki	**LR:** What do you think about it being on the internet, so you can get on it on your phone, or on the computer? **Pu1:** Yeah, yeah, um, easy.
		CLDT staff	**CLDT7:** I think that would be the biggest issue, is around computer resource and finance because, particularly some of our more able people who maybe don't have huge care packages, they're living on very fixed incomes, and actually one of the issues is they don't have spare money to spend on computers.
	Skills	PWLD/parents with a Wiki	**LR:** Did that [paper tool] feel a bit more, bit more accessible? **Pa2:** Well yeah, for me! Yeah, cos I'm not really au fait with.. it [computer use] probably
		PWLD/parents without a Wiki	**Pu3:** I think it's new I'm gonna need some help. **LR:** Do you think you could do all of that by yourself [set up Wiki] or would you want someone to show you? **Pu1:** Um to show me.
	Practical considerations for services	CLDT staff	**CLDT6:** It could be very time consuming, I'm thinking.. particularly when you first come across one. I can see that could be.. **CLDT2:** I think it would save time in the long run. I'm just thinking in terms of making resources and things like that, if we got to grips with it well then I think eventually it might, yeah, save us time. **CLDT5:** Good in principle. Um, I think once they come into the adult service it's who's got the technical ability to upload these things, because we don't have, like, ipads within our service. So it's like, what do you need to be able to help them do that, or would you get the young person to do that themselves? So you know, it's the technological side of things I've got questions about. **CLDT6:** I think it could be quite a few years off before we seriously think about this because we're not gonna see it. **CLDT5:** I think different staff will need different levels of support.

		CLDT7: I mean, we'd have to talk to probably the information governance team.
Not embedded	PWLD/parents with a Wiki	**LR:** Do you know did [name's] wiki get used at school, in terms of was it part of any meetings, or.. **Pa2:** Not really, because it was new, they hadn't really, you know, they're only just started off with them. **Pa4:** I'm afraid we simply haven't got into the habit of it. It's an excellent idea but we have been slow to use it
Need support – school and post-school/on-going	PWLD/parents with a Wiki	**Pa2:** Yep, yeah, I went to a few, umm.. well they weren't meetings, they were more demonstrations of the wiki, I went with [headteacher] to, um, I think we went to the council house actually, where they actually demonstrated the wiki. So that's how I first got introduced to it. Um, then went to a couple of other meetings, different places, about the wiki, and then.. in the beginning, school were really, really helpful…. See, now I haven't really got that. **Pa4:** I think my husband was trained
	PWLD/parents without a Wiki	**Pu3:** They should've, when we first went, they should've, before we was leaving school, they should've set us one up before. **Pa3:** What they could.. what I think a good idea would have been to get the kids together and say look, or all the parents, kids and parents, an afternoon like, after work or an hour, and explain it to the parents and the children at the same time. And then, this is how, if you wanted a wiki, you would set up one. **Pa3:** I think you'd need somebody to help, how to load it, because I'm gonna be honest, I'm gonna be saying "how'd you do it".
	CLDT staff	**CLDT7:** Actually one of the issues is they don't have spare money to spend on computers, computer support, and often they don't have people to support things. And often we find with our service users, things are fine when they're going well, as soon as something goes slightly wrong, everything goes wrong, and they don't have the support to put it right, so.. They need support to be able to manage when things go wrong somewhere, how do they find that help.. So it's the on-going maintenance and support, basically.
Limited familiarity – self	PWLD/parents without a Wiki	**Pu1:** Never seen one.
Limited familiarity – peers	PWLD/parents without a Wiki	**LR:** Do you know anyone else that's got a wiki? **Pu1:** No.
Limited familiarity – services/ professionals	PWLD/parents without a Wiki	**LR:** So all the people that you work with... Have any of those people ever asked you about wikis? Ever asked you if you have one? **Pu1:** No. **LR:** Has anyone ever mentioned them? **Pu1:** Um, not really.
Funding/cost	PWLD/parents without a Wiki	**LR:** If someone wanted to go off and buy their own wiki from the company, it costs about £60 a year. **Pu3:** Sod that!
	School staff	**SS:** Obviously we've got the two years funding now so obviously Bristol will pay for it, but we want to make it sustainable for them to say actually yeah I'm happy to pay the £40-60 or however much it is to take it on, because it's a very valuable tool for the child. **SS:** Going forward obviously, there might be a way of looking at the local offer and what the children receive by way of funding; is there a way that, if it becomes such an important tool that could part of the local offer at all?
	CLDT staff	**CLDT5:** When they get to 25 you're gonna have the same issues because no-one's going to be naturally funding it unless they take it on themselves.
Accessibility	School staff	**SS:** I think with parents it's all about ease of use and functionality, um, they don't want anything too complicated. **SS:** We've have lots of conversations about people like "oh I want to print things off", and actually that's taking away the functionality side of it, because actually we don't to be duplicating paperwork. We want something that's going to be there for them to use whenever, on whatever device, and that's the appealing thing of the wiki.

change their approach to facilitate Wikis. However, school staff acknowledged that this had in turn impacted on the pace at which progress had been made. Professionals noted the importance of demonstrating the value and impact of Wikis in order to get others on board, and school staff discussed ways in which Wikis and their uses are growing, thus increasing their use and value. Training and support needs were also identified.

Potential barriers. All participants identified potential barriers to Wikis being used, with many subthemes common across stakeholder groups. Many were concerned about the security of Wikis content and how individuals share their personal information. While some families had felt that the online format of Wikis was more secure than paper documents (above), others felt this increased concerns about hacking. Likewise, while some families and staff felt the multimedia format of Wikis made them preferable to more traditional tools and made information more accessible; some families and CLDT professionals felt this made them less accessible due to a lack of individual computer skills, service resources, and information governance procedures to support Wikis access. All PWLD/parents reported having sufficient computer resources, despite professionals being concerned about this. Some CLDT staff were concerned about Wikis being time-consuming, while others felt that they would accelerate information-gathering about individuals and their needs. While some PWLD reported good support from their school in establishing their Wikis, others felt they needed more support; while both PWLD/parents and CLDT staff recognised the need for on-going Wikis support after leaving school. PWLD/families described Wikis not being embedded or well known about (by them, their peers, and services) as a barrier, while all participant groups felt the cost of purchasing a Wiki was prohibitive.

Recommendations and Service Feedback

Based on the above, recommendations were generated to improve the future implementation and sustainability of Wikis. The lead researcher met with the SG in March 2017 to present the findings and discuss how the recommendations might be implemented.

The SG welcomed the feedback, reporting that it corroborated informal feedback that several members had received from parents. Predominantly: families believed that Wikis had good potential but wanted to see evidence of their impact, value, and support from wider services before investing time and finances in developing a Wiki for their child.

The SG were particularly struck by participants' concerns about lack of computer skills and requiring on-going support to use Wikis after leaving school. SG members felt that a Wikis app would be more accessible as then families could upload content directly from a smartphone or tablet, rather than via a computer, and all families were already accustomed to using (school) tablets. When embarking on the Wikis pilot, the SG had been assured by RixMedia that an app was being developed. However, at the time of feedback RixMedia advised that this had been more complex than anticipated, and no app was planned. This led the SG to consider whether to continue funding Wikis; or to explore alternative MPCPs or even develop their own app. They agreed the next step was for the SG to liaise with other Wiki pilot areas to establish their views on an app, before revisiting this with RixMedia and exploring independent app development.

While the priority for the SG was therefore to establish whether to proceed with Wikis or seek an alternative MPCP tool; the recommendations were discussed in some detail (see Table 4), as it was agreed that they would apply regardless of which tool the SG chose to proceed with.

Table 4.

Summary of recommendations and service feedback.

Recommendation	Discussion points	Suggested next steps
1. To introduce Wikis earlier in pupils' school journeys, and embed in existing school processes and documentation e.g. termly review and Education and Health Care Plans.	This is already happening at one EA school, where all pupils now have Wikis. Other schools are at different stages and making less use of Wikis. Parent-carer representatives suggested Wikis could even be introduced prior to schooling, although the SG noted some practical difficulties around this, e.g. identifying children and supporting development of Wiki in infancy. Noted that Bristol children in out of area educational placements may miss the opportunity to develop a Wiki at school.	SG to generate guidance as to how Wikis are utilised within schools and existing processes, using the leading EA school as a model. SG to contact Star college and discuss introducing Wikis to out of area pupils who will be returning to Bristol.
2. To increase knowledge of Wikis amongst PWLD and families.	This is happening at the abovementioned school, but less so in the other two EA schools.	SG to explore with the other two EA schools whether they plan to roll out Wikis more widely this year, and if not to explore barriers to this and any additional support that may be required.
3. To increase knowledge of Wikis amongst services and professionals.	This could include healthcare, children in care teams, day centres, adult services. Trying to give access to healthcare teams to view existing Wikis has been problematic due to issues around sharing email addresses. The director of adult social care has expressed an interest in Wikis.	a. To develop a flyer/small card that PWLD/families can take to appointments with other services/professionals to inform them about their Wiki and how to access it. b. To contact the editors of newsletters distributed within relevant local services and provide a written piece about Wikis to be included. c. SG lead to contact representatives from adult services (e.g. CLDT), healthcare, Star College, autism strategy group, and other local education

Recommendation	Discussion points	Suggested next steps
	Some SG members suggested that Wikis must first be embedded with pupils and families, who will bring Wikis to the fore of professionals' awareness although other SG members suggested this could be problematic as families may not be willing to invest in Wikis until professionals are signed up.	or day centre provision to invite them to a discussion about Wikis/to attend a SG meeting. d. SG to revisit the concept of a 'Wikis contract', which all professionals around a child are asked to sign up to before families invest time in Wikis development. To draft a contract for review at future SG meeting.
4. To make information about Wikis more accessible to the local public who wish to know more about them/find out how to get one through the local authority, and those who may be asked to support individuals to use their Wiki.	The Wikis SG had previously been putting together a public Wiki to go on the local authority website, containing information and points of contact about Wikis, but this had been put on hold some months ago.	Public Wiki to be updated to reflect current details and uploaded to local authority website. EA school lead to add basic information about how to upload to/use Wikis; 'crib sheet' for others who may be asked to support someone with a Wiki.
5. To review the guidance given to pupils and families about information security and safe information sharing using Wikis.	EA school advised that this is briefly covered in initial training but probably needs more consideration. Researcher advised the SG of service user and staff internet safety group in CLDT/adult services that could be a useful resource.	SG lead to contact adult transitions working group lead for information about internet safety group, to possibly provide service user input into school information/teaching about online security.
6. To consider long term funding options for Wikis.	Child services: schools will not be able to take on funding of Wikis. Local authority are looking to continue funding provided they can demonstrate value and use of Wikis. Funding into adulthood: Will depend on adult services' view of Wikis and whether they see their value and wish to secure funding. Discussed possibility of securing financial input from health if they see the value of Wikis.	SG lead to follow up adult social care lead's expression of interest about Wikis and invite to SG meetings.
7. To undertake on-going evaluation of Wikis impact/use, including follow up after leaving school.	Discussed how lead researcher could provide copies of materials used in this study and adapt to evaluation needs.	[Nothing yet, to be established once SG has made decision around future of Wikis]
8. For SG to continue meeting regularly to ensure momentum and pace is maintained.	SG discussed recent move to termly meetings to try and increase attendance. Current meeting indicates that this had not impacted on attendance.	SG lead to identify monthly meeting dates for remainder of school year and distribute to SG mailing list; location to alternate between schools to encourage representation from all EA schools.

Discussion

The original aim of this project was to explore how useful PWLD, families and professionals had found Wikis for holding an individual's story; how Wikis had been used in the transition onwards from school; and how willing PWLD/families were to share their Wikis with others. Unfortunately, due to the infancy of the Wikis pilot their use had not been fully embedded; thus while PWLD/families expressed enthusiasm for Wikis they had not made use of them beyond school, if at all. Additional stakeholder groups were therefore included in the evaluation process to explore the perceived utility and challenges of implementing Wikis.

Stakeholders recognised the value, benefits, and multiple functions of having a Wiki and sharing it with others, with their potential to ensure a person-centred approach and enhance social communication particularly prominent themes. Participants believed that Wikis could support the development of peer relationships; improve the individual's understanding and retention of information; and increase autonomy, choice and self-advocacy. This is consistent with positive outcomes reported by previous MPCP pilots (British Institute of Learning Disabilities, n.d.; Cavet & Grove, 2005), indicating that MPCPs have many potential benefits, regardless of the particular tool used. Taken together, these findings corroborate the value of supporting PWLD to hold a consistent narrative of their lives, to support their personal and social identity (Hewitt, 1997, 2000, 2006; Hussain & Raczka, 1997; Meininger, 2006; Nunkoosing & Haydon-Laurelut, 2013).

Several potential barriers to the use of Wikis were identified across stakeholder groups. A recurring theme was the lack of widespread knowledge about Wikis, with families highlighting that having other services ask about their Wiki and supporting its use would serve as a significant prompt/incentive to on-going use. Increasing availability and awareness of Wikis; broadening training and support; getting others on board; linking services; and demonstrating the impact and value of Wikis were all recognised as important factors in making Wikis a success. The SG reported that families were hesitant to adopt Wikis without assurances that other services (particularly healthcare and adult services) would support their on-going use. This may reflect the frustration and discontinuity that families have previously experienced around transitions between services (Beresford, 2004; Heslop, 2002; Hudson, 2006; Smart, 2004), and echoes previous cautions that services must be committed to person-centred planning and its values for it to succeed (Kendrick, 2004; Robertson et al., 2007). Families' particular focus on healthcare teams engaging with Wikis is perhaps unsurprising, given that a review of PWLD's experiences of healthcare found that improvements need to be made in advocacy, communication, involving PWLD in decision-making, making reasonable adjustments, and sharing important information about the individual (BILD/Mencap/DoH, 2013a, 2013b); all areas where Wikis could potentially be of assistance.

While participant groups referred to spreading awareness of Wikis amongst local services, the SG's suggestion of making contact with the Star college in another county, due to some pupils being there on out of area placements, raises an important issue. PWLD are

often placed in out-of-area educational or residential placements and so move between localities (Mansell, Beadle-Brown, Skidmore, Whelton, & Hutchinson, 2006; Shankar, Olotu, Axby, Hargreaves, & Devapriam, 2015). For Wikis to be sustainable, it seems that a greater awareness may be required nationally to ensure Wikis are consistently supported across placement moves between localities.

While CLDT staff were concerned about PWLD's access to computer resources, all PWLD/families reported having sufficient access. However, as with the previous Mencap study (Cavet & Grove, 2005), CLDT staff expressed concern regarding their own lack of resources and time, and potentially incompatible systems which may affect their ability to use Wikis when working with PWLD. All stakeholder groups identified that the cost of self-funding Wikis in adulthood would be prohibitive. Another recurring theme was concern about the security of information, and how PWLD/families could seek support around Wikis after leaving school, with some feeling that they had insufficient computer skills to manage this alone. This reinforces previous findings that developing competence in using MPCPs takes time and support (Grove, 2003); thus the SG's decision to focus on ensuring whichever MPCPs they use are, above all, easily accessible to PWLD/families seems well-considered.

Regarding the content of Wikis and comparison with pre-existing tools; professionals noted that Wiki content should be the owner's choice, reflecting Wikis' person-centred approach. They felt that Wikis serve a distinct function to service documentation, thus would not replace professional-led handover at transition points, but may be a useful addition to improve engagement and help professionals get to know the PWLD. Meanwhile, PWLD/families and CLDT staff held conflicting views as to whether multimedia, computer-based tools are more accessible and secure than traditional paper tools.

Limitations

There were several limitations to this research, predominantly the small number of participants within each stakeholder group. Greater numbers were not achieved due to the small size of the Wikis pilot.

Due to the profound and complex learning disabilities of those children with a Wiki, feedback from this stakeholder group relied on parental report. Although valuable, this feedback represents parents' own perspectives (with most data being provided by only one

parent), which cannot be considered representative of their children's views. Thus despite this project intending to primarily focus on the perspectives of PWLD with a Wiki, unfortunately no such individuals took part. While this was an unforeseeable constraint resulting from the pilot's small size and some families declining to participate, it is unfortunate nonetheless.

All primary research tasks were undertaken by the lead researcher, with a considerable background in working with PWLD. While this may have benefitted data collection, due to the researcher's experience of communicating with and seeking the views of PWLD, it is possible that question design, data collection, and analysis may have been influenced by the researcher's own experience. However, it is hoped that external scrutiny by the second-rater and other members of the research team will have mitigated such issues.

Summary

In summary, while all stakeholder groups recognised potential value and benefits to using Wikis, PWLD/families had made limited use of them due to their infancy. All stakeholder groups identified multiple potential barriers to sustaining Wikis, but also factors which could support their implementation. Considering the existing literature, it seems paramount that future endeavours to implement MPCPs ensure that they are fully embedded and valued across key services, who fully embrace a person-centred approach. This needs to occur at a local and potentially national level, to ensure consistency across services and placements. Otherwise Wikis and MPCPs may have the potential to become another source of frustration for PWLD/families if their use is inconsistent across services. However, given the concerns raised by families in previous research regarding service provision and transitions; if implemented successfully it seems that MPCPs have the potential to not only provide PWLD with a means to hold a clear narrative of their life, but also to improve their experiences of interactions with services, professionals and peers.

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Main Research Project:

Investigating Associations between Exposure to Pornography and Harmful Sexual Behaviour in Young People

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Introduction

Young people (YP) today have greater access to the internet than ever before, with children and adolescents in the UK spending an average of 15 hours a week online (OfCom, 2016). Many own an internet-enabled media device from a young age; in the UK, 16% of those aged 3-4 own a tablet and 41% aged 5-15 a smartphone, with rates increasing with age (79% for 12-15 year olds; OfCom, 2016). Rising personal, private internet access makes it challenging for parents to monitor their children's online activity (Duerager & Livingstone, 2012), which YP may deliberately conceal (Mishna, McLuckie, & Saini, 2009).

The internet provides increased opportunities, information and social connection (Mishna et al., 2009; Rallings, 2015), which can be constrained by overly restrictive parental monitoring (Duerager & Livingstone, 2012; Livingstone & Helsper, 2008). However, the internet also holds multiple risks for YP, and while most are unaffected by such risks, there is evidence of negative psychosocial and emotional consequences for those who are (Livingstone & Smith, 2014). Risks include sexual solicitation, grooming, and harassment (Finkelhor, Mitchell, & Wolak, 2000; Quayle & Taylor, 2011; Whittle, Hamilton-Giachritsis, Beech, & Collings, 2013), potentially leading to contact sexual abuse (Say, Babadağı, Karabekiroğlu, Yüce, & Akbaş, 2015; Whittle, Hamilton-Giachritsis, & Beech, 2013); political radicalisation (Quayle & Taylor, 2011); stalking (Mishna et al., 2009); bullying (Finkelhor et al., 2000; Fleming, Greentree, Cocotti-Muller, Elias, & Morrison, 2006); and risks to physical health (Slavtcheva-Petkova, Nash, & Bulger, 2015). YP are also at risk of intentional or accidental exposure to online sexually explicit material (SEM) or pornography (Fleming et al., 2006; Mishna et al., 2009), creating considerable public concern ("Independent Parliamentary Inquiry into Online Child Protection," 2012).

Exposure to Online Pornography

Lifetime estimates of child/adolescent exposure to online pornography range from 43-99% across time and country (Horvath, 2013). Of 1001 UK 11-16 year olds, 48% had viewed online pornography, with rates increasing with age (Martellozzo et al., 2017). Some YP express uncertainty about the morality of using pornography and concern about addiction (Mishna et al., 2009).

Evidence regarding which adolescents expose themselves to pornography is still developing (Peter & Valkenburg, 2016). Current research indicates that frequent viewers of pornography are more likely to be male, sensation seekers, more advanced in their pubertal

development, and to have weak/troubled family relations; additionally, males are also more likely to intentionally view pornography and more hardcore content (Hald, Kuyper, Adam & de Wit, 2013; Martellozzo et al., 2017; Romito & Beltramini, 2015; Peter & Valkenburg, 2016; Walker, Temple-Smith, Higgs & Sanci, 2015). Studies have failed to demonstrate an association between various sociodemographic factors and pornography exposure (e.g., ethnicity, immigration status, parental education and un/employment, socioeconomic status; Romito & Beltramini, 2015; Svedin, Akerman and Priebe, 2011; Ybarra & Mitchell, 2005). However, frequent users are more likely to display social and health risk factors such as smoking, drinking, mental health difficulties and or/suicidal thoughts, and conduct problems (Romito & Beltramini, 2015; Svedin et al., 2011). Additionally, female (and, in some studies male) adolescents who view pornography are more likely to have experienced victimisation such as physical and sexual violence, although the directionality of this relationship is unclear (Peter & Valkenburg, 2016; Romito & Beltramini, 2015; Svedin et al., 2011). Frequent users of pornography are more likely to have viewed deviant forms of pornography (i.e., involving violence/force, children, or animals; Svedin et al, 2011), with violent/degrading pornography more common among those who had taken sexual images of others or had such images taken of them[1], whose friends buy/sell sex[2], and (females) who have experienced family violence (Romito & Beltramini, 2015). Additionally, a longitudinal study demonstrated that hyper gender orientation (i.e. hypermasculinity in males and byperfemininity in females) predicted adolescent exposure to violence-themed pornography, but not dominance- or affection-themed (Vandenbosch, 2015).

As well as making pornography accessible to YP actively seeking it, internet use can result in unwanted exposure to SEM. Over a decade ago, 25% of American 10-17-year-olds reported unwanted exposure to SEM over the previous year (Mitchell, Finkelhor, & Wolak, 2003). In a recent UK sample, YP were equally likely to have found online pornography accidentally as intentionally (Martellozzo et al., 2017). Surveys indicate that a significant proportion of YP and parents in the UK are concerned about online exposure to SEM and its effects on YP ("Independent Parliamentary Inquiry into Online Child Protection," 2012; Livingstone, Kirwil, Ponte, & Staksrud, 2014). This is unsurprising, given that mainstream

[1] Reported by 70.7% of males and 47.1% of females who had watched violent/degrading pornography, vs. 24.4% and 23.5% who had watched non-violent pornography, vs. 4.9% and 29.4% who had not viewed pornography.

[2] Reported by 60.4% of males and 31.2% of females who had watched violent/degrading pornography, vs. 29.7% and 25% who had watched non-violent pornography, vs. 9.9% and 43.8% who had not viewed pornography.

pornography is a poor model for safe, consensual sexual encounters (Martellozzo et al., 2017), portraying sexualisation of teenagers; objectification; coercion; impersonal sexual encounters involving manipulation, domination and inflicting pain/violence (often gratuitous and towards women, who are frequently portrayed as enjoying it); and poor communication about or overt non-consent (American Psychological Association, 2008; Bridges, Wosnitzer, Scharrer, Sun, & Liberman, 2010; Gorman, Monk-Turner & Fish, 2010; Klaassen & Peter, 2014; Romito & Beltramini, 2015; Vannier, Currie, & Sullivan, 2014).

However, evidence of exposure is not evidence of inevitable harm (Livingstone & Smith, 2014). For some YP, pornography may provide information about sexuality (Slavtcheva-Petkova et al., 2015; Wallmyr & Welin, 2006), sexual health (Barak & Fisher, 2001) and other issues that adults are unwilling to discuss (Buckingham, 2004), thus there may be disadvantages to preventing access to pornography for this group. It is therefore important to understand the potential harms associated with exposure to pornography and those at increased risk.

Harmful Outcomes Associated with Online Pornography

While increasing research has investigated the prevalence of viewing pornography among YP, far less has explored the effects of exposure, and fewer still have considered what factors may increase likelihood of harm (Livingstone & Smith, 2014; Slavtcheva-Petkova et al., 2015)

A narrative review by Owens, Behun, Manning and Reid (2012) summarised literature from 2005-2012 regarding phenomena associated with YP's exposure to online pornography. This included associations of pornography with female body image and male sexual performance concerns; increased acceptance of traditional gender roles; decreased social integration; increased aggressiveness; conduct difficulties; delinquent and antisocial behaviour; and poorer bonding with caregivers.

Research indicates that YP have mixed psychological and emotional responses to pornography. Of 1501 10-17-year-olds exposed to unwanted SEM, 24% were very upset, 21% embarrassed and 19% stressed. Gender had an effect, with girls more likely to report embarrassment and disgust than boys (73% vs. 25%; 51% vs. 20%, respectively) (Sabina, Wolak, & Finkelhor, 2008). Both genders report diverse experiences; with some experiencing guilt, shame and unwanted thoughts following exposure, while others report

sexual excitement (although significantly more males than females). UK findings suggest that YP may become desensitised to pornographic content, reporting less shocked, nervous, and disgusted responses and increased positive responses (e.g., turned on, happy, excited) in their current compared to first viewing of pornography (Martellozzo et al., 2017). However, this trend could reflect sexual maturation or a change in the content sought.

Regarding sexual attitudes and beliefs, longitudinal studies have demonstrated that (early) SEM exposure is predictive of less progressive gender role attitudes and more permissive sexual norms (Brown & Engle, 2009; Peter & Valkenburg, 2016), with young people expressing concern that pornography reinforces men's power and subordination over women and alters their sexual expectations (Walker et al., 2015). Sexual norms may translate to sexual behaviour, with adolescents exposed to SEM more likely to have engaged in oral[3] and sexual intercourse[4] at two year follow-up (Brown & Engle, 2009). They are also twice as likely to have had anal sex[5] or multiple sexual partners[6], and nearly three times more likely to use substances during sexual encounters[7] (Braun-Courville & Rojas, 2009). When compared with infrequent users, adolescents who used pornography daily were significantly more likely to have had their first sexual experience before the age of 15[8], to have sold or bought sex[9] (Svedin et al., 2011) and to have taken or been in sexual images (Romito & Beltramini, 2015). Additionally, increased exposure to SEM has been linked to increased sexual desire (Svedin et al., 2011) and preoccupation with sex, although mediated by subjective sexual arousal in response to SEM (Peter & Valkenburg, 2008). Frequent users are more likely to report positive attitudes to pornography and feeling "turned on" and excited compared to non-frequent users, and are more likely to report wanting to try/trying things seen in pornography as a result of having viewed it (Svedin et al., 2011).

While there is significant evidence that pornography use is associated with sexual attitudes and behaviours, the evidence regarding whether pornography is a causal factor is varied. Studies have explored bidirectional relationships between sexual attitudes and pornography use, demonstrating that pornography use predicts permissive attitudes (rather

[3] Male OR = 1.72, 95%, CI 1.35 to 2.19, $p < .001$; female OR = 1.49, 95% CI 1.01to 2.21, $p = .047$
[4] Male OR = 1.74, 95% CI 1.33 to 2.26, $p < .001$; female OR = 1.50, 95% CI 1.04 to 2.16, $p = .031$
[5] OR = 2.0, 95% CI 1.2 to 3.4
[6] In their lifetime: OR = 1.8, 95% 1.2 to 2.9; in the past 3 months OR = 1.8, 95% 1.1 to 3.1
[7] OR = 2.8, 95% 1.5 to 5.2
[8] Adjusted OR = 0.77
[9] Sold sex adjusted OR = 2.68; Bought sex adjusted OR = 1.71

than the reverse), while a bidirectional relationship exists between pornography use and gender-stereotypical sexual beliefs (Peter & Vanderburg, 2016). Regarding sexual behaviour, pornography use accounts for only a modest amount of variation in young people's sexual behaviour over and above that accounted for by other factors (e.g., sociodemographic characteristics, attitudes, skills, relationships, media use), thus is only one of multiple influences on sexual behaviours (Hald et al., 2013), and causality remains unclear (Peter & Valkenburg, 2016).

Pornography and Harmful Sexual Behaviour

Research has also considered the link between YP's exposure to pornography and *harmful* sexual behaviour (HSB). YP under 18 years are responsible for at least a third of sexual offences against other YP (Hackett, Holmes, & Branigan, 2016), with males comprising the majority of YP in HSB services (97%) and an overrepresentation of people with learning disabilities (Hackett, Phillips, Masson, & Balfe, 2013). Adolescents who have sexually abused others are more likely to have experienced physical and sexual abuse than non-sexual offenders (Ford & Linney, 1995; Seto & Lalumiere, 2010). In a UK review of 700 adolescents with HSB, two thirds had experienced previous victimisation, with a third having been sexually abused (Hackett et al., 2013). Current evidence suggests that YP with HSB have different treatment needs distinct from adult sexual offending (Hackett et al., 2016; Smith, Bradbury-Jones, Lazenbatt, & Taylor, 2013).

Consistent links have been found between YP viewing pornography and engaging in sexually aggressive behaviour, with early SEM exposure predicting perpetration of sexual harassment by adolescent males (Brown & Engle, 2009), and increased exposure associated with sexual aggression and greater rates of sexually coercive behaviour (Malamuth, Addison, & Koss, 2000; Peter & Valkenburg, 2016; Svedin et al., 2011). Adolescent sex offenders report greater exposure to pornography compared to non-sexual offenders (d=.27, 95% CI 0.05-0.49 across eight studies; Seto & Lalumiere, 2010), particularly more exposure at an early age (before age 10; Burton, Leibowitz, & Howard, 2010). In a qualitative study of young perpetrators of HSB and treatment workers, many participants discussed exposure to pornography, with 3 of 14 young men identifying pornography as a trigger for their HSB (McKibbin, Humphreys, & Hamilton, 2017), implicating support for managing pornography use as a preventative strategy.

A subset of research has demonstrated that only violent SEM is related to sexually aggressive behaviour, rather than SEM as whole (Ybarra, Mitchell, Hamburger, Diener-West, & Leaf, 2011). In summarising the literature, Owens et al. (2012) recognised that exposure to pornography in the studies included was associated with aggressive sexual behaviour only for males with predisposing risk factors, who may also be more likely to intentionally seek out (violent) pornography, yet causality and the mechanisms of this relationship remain unknown. A more recent synthesis of 22 adolescent and adult studies using general population samples found a significant correlation between pornography consumption and verbal and physical sexual aggression for all forms of pornography (Wright, Tokunaga & Kraus, 2016). While the association was stronger for violent than general pornography, the difference was not significant (possibly because relatively few studies specifically explored non-violent pornography). However, included studies were primarily USA-based and none conducted in the UK, reflecting a paucity of UK-based general population studies in this area. Given the growing body of evidence demonstrating links between pornography use and HSB, it is important to consider the underlying mechanisms at play in order to better understand this relationship and identify intervention opportunities.

Models and Theories of Pornography's Role in Harmful Sexual Behaviour

Over recent years, several frameworks have been proposed which integrate existing findings regarding the predictors and associated outcomes/phenomena of YP's pornography use (Peter & Valkenburg, 2016). These models attempt to explain the mechanisms by which pornography may have an impact on individuals, and include the Differential Susceptibility to Media Effects Model (DSMM; Valkenburg & Peter, 2013), the confluence model of sexual aggression (Malamuth at al., 2000) and the sexual script Acquisition, Activation, Application model of sexual media socialisation ($_3$AM; Wright, 2014). While these models reflect relatively recent developments in the literature, they have their origins in a myriad of general psychological processes which have received significant empirical support over the years, such as modelling and social learning, desensitisation, normalisation, priming, reasoned-action, social comparison, uses and gratification, and attitude-formation. This broader, theoretically-driven evidence base has given researchers considerable justification for hypothesising that pornography will have an impact on (young) people; for example, many have approached pornography as a source of social learning in line with Bandura's (1977) social cognitive theory (Wright et al., 2016), which guided the initial development of sexual script theory (Simon & Gagnon, 1986, 2013). The strong evidence base for these

general cognitive and behavioural processes has also enabled researchers to use theoretically-based, ad hoc reasoning to explain previous findings regarding pornography's impact (Peter & Valkenburg, 2016).

However, as the field of pornography research grows and models of pornography use are developed, it is important that research is guided by these more specific models and moves towards testing their components (Peter & Valkenburg, 2016). In doing so, it is hoped that researchers will develop a more nuanced understanding of pathways to the potentially harmful effects of pornography, thus identifying opportunities for intervention.

While there are multiple different frameworks available, it is important to note that they are not necessarily competing, but focus on different levels and mechanisms by which pornography may have an impact. For example, the DSMM (Valkenburg & Peter) is a broad framework encompassing how many forms of media can have an impact on behavioural and other outcomes for any individual; while the 3AM (Wright, 2014) has a narrower focus, specifically identifying how exposure to sexual media impacts on the sexual behaviours of YP, which can be accommodated within the broader DSMM frame.

The DSMM has four key propositions (see Figure 1): (1) dispositional, developmental and social variables predict susceptibility to media use; (2) cognitive, emotional and excitative (physiological) responses mediate the relationship between media use and criterion variables (i.e., outcomes such as sexual behaviour); (3) susceptibility variables also moderate to what extent media use predicts criterion variables; and (4) media use and criterion variables are transactionally related, such that criterion variables can themselves predict media use and moderate responses to use (Peter & Valkenburg, 2016; Valkenburg & Peter, 2013). The DSMM is a comprehensive framework that has been shown to encompass many existing findings on the effects of pornography on YP and may have value in guiding future research (Peter & Valkenburg, 2016).

The 3AM proposes that sexual media introduces YP to new sexual scripts (acquisition), primes existing scripts (activation), and depicts associated behaviours as positive, normative and acceptable, thus encouraging acting in accordance with sexual scripts (application). The 3AM therefore provides specific mechanisms by which media use may generate certain responses, thus can be accommodated within proposition two of the DSMM. Several studies of younger adult men (aged 18-30) have provided evidence in

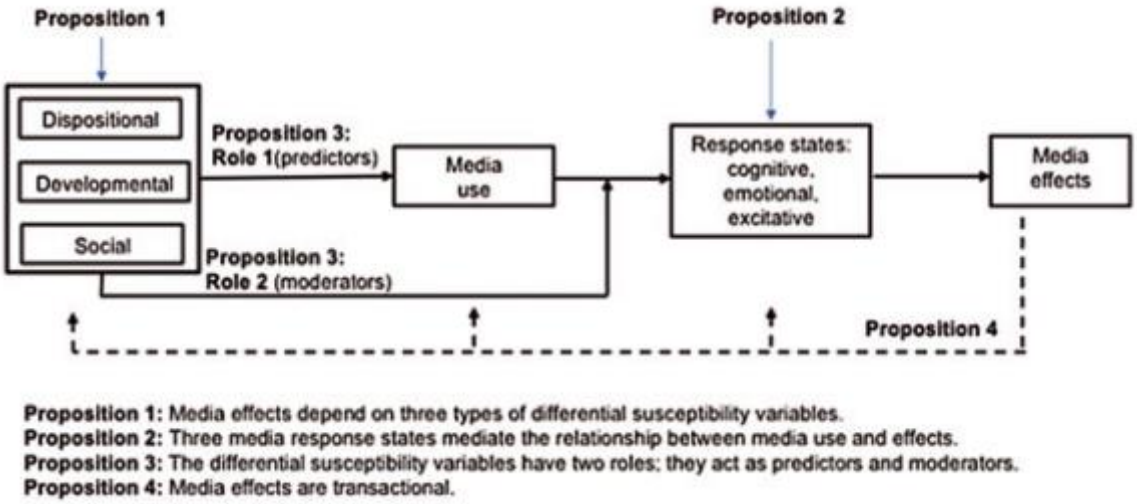

Figure 1. The four propositions of the Differential Susceptibility to Media Effects Model (DSMM), taken from Valkenburg and Peter (2013).

support of the role of sexual scripts, with more frequent pornography use associated with more pornography-congruent sexual behaviours and expectations (Sun, Bridges, Johnason & Ezzell, 2016); and with potentially risky behaviours. The latter association is partially mediated by permissive sexual scripts (Braithwaite, Coulson, Keddington & Fincham, 2015). However, as yet studies have failed to explore the role of mediators within younger samples (Peter & Vanderburg, 2016), and in particular the mediators of pornography's impact on HSB.

In this study, we seek to further our understanding of potential predictors of both pornography use and HSB, and of mediating factors in the relationship between pornography use and HSB. Given the DSMM's potential for integrating both predictive factors and mediators, we will consider the aims and findings of the current study within this broad framework.

Aims and Rationale

In summary, there is growing evidence of exposure to online pornography amongst YP and of associations with mixed emotional reactions, stress symptoms, intrusive thoughts, attitudes towards sex and gender, and sexual behaviours. However, the nature of these relationships and mechanisms of how exposure to pornography impacts on behaviour are largely unknown (Martellozzo et al., 2017), and there has been little empirical testing of the models developed to explain these relationships. Existing studies have predominantly used

American (often male) samples and were carried out in the last decade, since which YP's access to online pornography has continued to rise.

This study aimed therefore aimed to identify current rates of pornography use in YP within the UK, to see if existing international findings are replicated within a UK clinical and community population of young people in late adolescence/early adulthood, of any gender. Such findings would serve to evidence proposition one of the DSMM. Based on previous literature, it was hypothesised that:

1. Pornography use will be higher amongst males, older participants, those with a history of aggression, and those who have experienced victimisation;
2. In particular, use of aggressive pornography will by higher in those with a history of aggression;
3. There will be no significant difference in pornography use according to ethnicity, parental education, or school type;

We also explored whether there would be a difference in pornography use related to sexual orientation, level of learning support, and availability of emotional support.

Having considered the literature regarding characteristics of HSB samples and links with pornography use, we took an exploratory approach to examining whether several demographic characteristics (age, sexual orientation, ethnicity, parental education, school type, availability of emotional support) and features of pornography use (means of sourcing pornography, devices used, format of viewing, reasons for viewing, personal importance, extent to which pornography represents personal ideal of sex) differed between non-HSB and HSB samples. Additionally, the following specific hypotheses were generated based on existing literature:

4. Higher rates of HSB will be associated with individuals who:
    a. are male, have additional learning needs, have a history of aggression or who have been victimised themselves;
    b. demonstrate higher duration and frequency of viewing pornography;
    c. were younger at first age of viewing pornography.

This study sought to add to the evidence base regarding the relationship between viewing pornography and HSB within a UK sample, thus it was hypothesised that:

5. There will be a positive association between exposure to pornography and HSB.

6. There will be a positive association between exposure to aggressive, non-consenting and/or coercive pornography (AP) and HSB.

Furthermore, we sought to develop our understanding of the relationship between viewing pornography and HSB by exploring potential mediators in this relationship, which would provide evidence for proposition two of the DSMM. We examined whether sexually-relevant emotional (emotional response), physiological (sexual arousal), and cognitive (sexual attitudes) factors acted as mediators, as well as two additional behavioural factors we considered to be of interest (objectification and pornography addictiveness). While previous literature has demonstrated associations between these factors and pornography use and/or HSB, they have yet to be explicitly examined as mediators between the two; thus, an exploratory approach was taken.

Method

Design

This study utilised a cross-sectional design comparing individuals who have and have not displayed HSB. Approximately twenty 16-19 year olds from a local research initiative were consulted regarding the design and materials. Ethical approval was granted by the University of Bath Department of Psychology Ethics Committee (reference 16-224; Appendix W) and relevant HSB services (Appendix X).

Definitions

Pornography. Pornography was defined as "images and films of people having sex or behaving sexually. This includes semi-naked and naked images and films of people." This shortened version of Martellozzo et al. (2017)'s definition was endorsed by the YP consulted regarding design.

Harmful sexual behaviour. Participants were identified as belonging to the HSB sample if they a) were recruited through or reported input from specialist services regarding their sexual behaviour; or b) self-reported commission of HSB[10].

[10] Self-reported HSB was determined by a positive response to the question "During a sexual encounter with another person, have you ever: a) Done something you weren't sure the other person wanted? b) Done something which the other person said was not okay or said they were unhappy about, either before it happened or at the time? OR Have you ever shared a sexual image of someone that you weren't sure they wanted shared?". This definition was adopted to capture the middle to upper end of the continuum of sexual behaviours proposed by Hackett and colleagues (2010, 2016), i.e., capturing problematic sexual behaviour where consent issues may be unclear and thus behaviour may potentially be harmful to others.

Participants

Overall, 124 YP (16-21 years) were recruited to two samples: those who had displayed HSB (n=31) and those who had not (n=93; Table 1). Two additional participants were excluded as they did not answer questions regarding HSB. Participants had to be fluent English speakers, permanent UK residents and not currently involved in a court-case regarding their sexual behaviour. Participants recruited early in the study received a £5 online shopping voucher[11].

Community recruitment. Recruitment was pursued online (i.e., research participation websites; social media), and through schools/colleges. The lead researcher (LR) contacted all 6th form schools/colleges within the local area (approximately 50); one expressed interest late in the data collection process. As sufficient numbers had been recruited online, this was not pursued further.

Online recruitment yielded 404 respondents. Due to concerns about fraudulent activity, stringent data validity checks were applied. This resulted in 283 respondents being excluded (see Appendix Y for full details). Of the remaining 121 respondents, 119 responded to HSB screening questions and were included for statistical analysis.

Service recruitment. Eight services for YP with HSB expressed interest in participating[12]; one later declined involvement due to other research commitments, one failed to identify YP meeting the research criteria and five have additional ethical and managerial approval processes that remain ongoing. Data is therefore reported on six participants (five valid) recruited through one HSB service.

Table 1.
Numbers of participants recruited.

Recruitment avenue	Sample		
	Non-HSB	HSB	Total
Community	93	26	119
HSB services	-	5	5
Total	**93**	**31**	**124**

[11] Appendix Y details why not all participants received payment.
[12] HSB services who were interested in participating were predominantly from the South East of England.

Materials

An online questionnaire pack (Appendix Z) was created consisting of the measures/questions outlined in Table 2.

Procedure

Online participants. Participants were directed from recruitment websites to online information and consent forms, and screening questions (Appendices AA-AB). Those not meeting criteria were redirected to an exit page, while suitable participants proceeded to research questionnaires and debrief (Appendix AC). Those recruited early in the study then registered to receive their £5 voucher.

HSB service participants. Participants were given an information form by a service clinician and invited to consent to be contacted by the LR. The service gained written consent from social workers and/or parents. After initial telephone contact, the LR met with each participant at their service. Participants completed a consent form and online questionnaires while the LR and a staff member were present but otherwise occupied (silently) in the room. Participants completed voucher registration form, then were debriefed and supported to identify whether they wished to access additional support in case of distress; none did (Appendices AC-AE).

Ethical considerations. All participants were informed prior to participating (in study information and, for service participants, in person) that if they provided any identifying information in their responses and indicated commission of HSB, this would have to be shared with the service/relevant authorities. In case participants later wished to withdraw their data, they selected a non-identifying personal password at the start of the questionnaires and were given details of how to anonymously contact the LR to request data removal. The online system did not record the IP addresses of computers used for the survey. Email addresses (for distributing vouchers) and questionnaire data were collected in separate internet windows and could not be connected. To ensure participants were not exposed to new ideas about pornography (and avoid unnecessary research burden), the online system automatically missed all pornography-specific questions if participants indicated not having viewed pornography previously. Question regarding pornography content was open-ended with minimal prompts, to prevent imparting 'suggestions' of pornographic content. Debrief

Table 2.
Questionnaire items/measures used.

Factor	Description/Items	Validity/reliability	Analysis
Demographic data	Age		Raw score used
	Gender (self and parent-identified)		Converted to 3 response options: Male, female, other
	Ethnicity (18 response options)		Converted to 2 response categories: White-British, other
	Sexual orientation (5 response options)		Converted to 4 response options: Bisexual, heterosexual/straight, gay/homosexual, other
	Type of school (4 response options)		All options retained
	Level of learning support (3 response options)		Converted to 2 response categories: mainstream, additional support
	Primary parent/carer education (3 response options)		All options retained
	Availability of support figure (1-5 Likert scale)		Converted to 3 response categories: Never/once, sometimes, often/always
	Previous involvement in physical fights (yes, yes in self-defence, no)		Converted to Y/N response
	Experience of HSB from others		Y/N response

Factor	Description/Items	Validity/reliability	Analysis
Childhood maltreatment	8-item measure regarding maltreatment by others during childhood, designed by the research team based on a review of other measures	Cronbach's alpha: Whole sample = .88; Non-HSB sample = .88; HSB sample = .86: Good internal consistency	Total score used to examine associations with HSB and with pornography use
Pornography use	Use of pornography; use of non-consenting, coercive or aggressive pornography		Y/N responses used throughout analyses
	Age first viewed		Raw age used
	Frequency of viewing (9 response options)		Converted to 4 response categories: monthly or less, weekly/fortnightly, multiple times/wk, daily or more
	Average duration of viewing (5 response options)		Converted to 3 response categories: <15mins, 15-30mins, 30mins+
	Means of sourcing pornography (6 options); format of viewing pornography (6 options); devices used to access pornography (6 options); reasons for looking at pornography (7 options)		Y/N responses calculated for each possible response
	Personal importance of pornography (1-5 Likert scale)		Converted to 3 response categories: not important, neutral, important
	Extent to which pornography represents personal ideal sex (1-5 Likert scale)		Converted to 3 response categories: not representative, neutral, representative

Factor	Description/Items	Validity/reliability	Analysis
	Change in pornography use if have received input for sexual behaviour Brief description of content of pornography viewed		*Not included in analyses due to low response frequencies*
Emotional responses	Participants selected their emotional responses to pornography from many response options (e.g. satisfied, anxious, calm, excited, ashamed)		Y/N response to each of five broad categories used in mediational analysis (neutral, angry/confused, aroused/excited, happy/interested, shame/regret); used in mediational analysis
Sexual arousal	Single 5-point Likert scale		Converted to three response categories: none, somewhat, very Used in mediational analysis
Addictiveness to pornography	**Cyber Pornography Use Inventory – Addictive Patterns subscale – Modified (CPUI-A-M):** The CPUI has three factors: addictive patterns, guilt regarding online pornography, online-sexual behaviour-social (Grubbs, Sessoms, Wheeler, & Volk, 2010). This study used the addictive patterns subscale (18 items). Items were modified to: a) refer to all forms of pornography, not just online; b) ensure consistent grammatical tense used throughout; c) allow responding using the same 7-point Likert scale across items.	Cronbach's alpha: Whole sample = .91; Non-HSB sample = .90; HSB sample = .86: High internal consistency.	Mean CPUI-A-M score used in mediational analyses
Sexual attitudes	**Brief Sexual Attitudes Scale (BSAS; Hendrick, Hendrick, & Reich, 2006):**	All four subscales have demonstrated acceptable to excellent levels of internal	Total BSAS-PI score (permissiveness + instrumentality items) used in mediational analyses

Factor	Description/Items	Validity/reliability	Analysis
	23-item self-report scale with four attitudinal dimensions: permissiveness (10 items), birth control (3 items), communion (5 items), and instrumentality (5 items). All subscales administered. Permissiveness and instrumentality were deemed to be most relevant to the current research. A combined permissiveness/instrumentality score was calculated and used for analyses: BSAS-PI (higher scores indicate more utilitarian and permissive approach to sex).	consistency in previous samples. Current sample Cronbach's alpha for BSAS-PI: Whole sample = .89; Non-HSB sample = .89; HSB sample = .87: Good internal consistency	
Perpetration of sexual objectification	**Sexual Objectification: Interpersonal Sexual Objectification Scale – Perpetrator Version (ISOS-P; Gervais, Dilillo, & McChargue, 2014):** The Interpersonal Sexual Objectification Scale (ISOS; Kozee, Tylka, Augustus-Horvath, & Denchik, 2007) is a 15-item self-report scale capturing women's experiences of being sexually objectified (body evaluation – 11 items, unwanted sexual advances – 4 items). The ISOS-P is a modified version; items have been reworded to assess perpetration (vs. experience). Items are rated on a 5-point Likert scale. The ISOS-P is currently the only available self-report measure of interpersonal sexual objectification perpetration	Good internal reliability in original sample. Awaiting further psychometric validation. Current sample Cronbach's alpha: Whole sample = .88; Non-HSB sample = .84; HSB sample = .89: Good internal consistency.	Mean ISOS-P score used in mediational analyses

Other data collected but not included in analyses: Second parent/carer's education; Data regarding online activity (School and parental online safety teaching, including pornography-specific teaching; parental monitoring/restriction of online activity; openness/honesty with parents about online activity); Age viewed pornography most frequently; General feedback on pornography and research experience.

included providing details of organisations and support avenues in case of distress resulting from participation.

Data Analysis Plan

Power analysis. An *a priori* power analysis was conducted to determine sample size required for binary logistic regression (mediational analysis). This determined that 133 participants were required to achieve empirical validity; power=0.8, α error prob=0.05, effect size=1.68).

Treatment of data. Descriptive statistics calculated. Where variables had low response frequencies, categories were sometimes concatenated (e.g. single 5-point Likert scales converted to no/neutral/yes responses; ethnicity collapsed into 'White-British' and 'other'; nine response categories for frequency of viewing pornography concatenated into four; see Table 2). Variables with potentially multiple responses per participant were converted into yes/no for each response category (e.g. emotional response to pornography was converted into yes/no for five categories: neutral, angry/confused, aroused/excited, happy/interested, shame/regret).

Analysis plan. Point biserial correlations were conducted to explore relationships between continuous and categorical variables, with outliers excluded if indicated by visual inspection of box plots. Data was log transformed where continuous variables demonstrated significant skew. Where assumptions for parametric analysis were still unmet, non-parametric tests (Mann-Whitney) were calculated and non-parametric effect sizes were calculated (as per Field, 2013, p. 227). Chi-square tests were conducted to explore differences between two categorical variables, with Fisher's exact probability used where more than 20% of cells had expected frequencies <5.

To investigate the role of potential mediators, associations between predictors, outcomes and potential mediators were explored. Provided the proposed mediator was significantly associated with both the predictor and outcome, logistic regression with bootstrapping was used to calculate a mediational model, using Preacher and Hayes' approach (Hayes, 2013).

For all analyses, missing data was excluded on a casewise basis. Effect sizes were considered against Cohen's (1988) benchmarks. Unless otherwise stated, a two-tailed significance level of p=.05 was employed for all tests. While some advocate the use of familywise error rate where multiple analyses are conducted (i.e. applying the Bonferroni correction), it is argued that this approach is too conservative and leads to underpowered analyses and increased risk of making a Type II error, i.e., incorrectly accepting the null hypothesis (Ellis, 2010). The authors therefore opted not to apply a familywise error rate, having defined all hypotheses and planned statistical analyses *a priori.*

For analyses exploring features of pornography use or whether pornography use included aggressive/non-consenting/coercive pornography (AP), only the data of participants who had viewed pornography was included.

Results

Participant Characteristics

For demographic characteristics, see Table 3. In brief, approximately half were female (51.6%), 42.7% male and the rest identified as other genders (4.8%). Mean age was 17.94 years (SD=1.75, mode=17); most identified as White-British; over half had attended state school, with the majority requiring no additional support.

Rates of and Associations with Viewing Pornography

Only 19 YP (15.3%) stated that they had *not* viewed pornography (no pornography group; NPG). Of those that *had* viewed pornography (pornography group; PG), 42.9% had viewed AP (Table 4).

There were few significant differences between PG and NPG (Table 5; full results in Appendix AF). Factors associated with pornography use related to bisexuality and experience of HSB from others. These accounted for 5.3% and 3.8% of group allocations, respectively (small effects).

The PG and NPG did not differ regarding previous fights. However, given evidence that pre-existing aggressive tendencies may be associated with seeking AP, a chi-square analysis was conducted. The AP group were significantly more likely to have been in previous fights than the non-AP group (57.4% vs. 42.6%; χ^2=5.50, df=1, p=.016, Cramer's V=.239; one-tailed test).

Table 3.
Demographic characteristics of participants (N=124).

		Non-HSB sample n=93, 75% Number (%) *unless otherwise stated*	HSB sample n=31, 25% Number (%) *unless otherwise stated*	**All participants N=124** ***unless otherwise stated***
Age	Mean (SD)	17.90 yrs (1.87)	18.06 yrs (1.37)	**17.94 yrs (1.75)**
	Mode	16	17	**17**
	16	30 (32.3%)	2 (6.5%)	**32 (25.8%)**
	17	21(22.6%)	12 (38.7%)	**33 (26.6%)**
	18	9 (9.7%)	7 (22.6%)	**16 (12.9%)**
	19	9 (9.7%)	3 (9.7%)	**12 (9.7%)**
	20	9 (9.7%)	6 (19.4%)	**15 (12.1%)**
	21	15 (16.1%)	1 (3.2%)	**16 12.9%)**
Gender				
	Male	39 (41.9%)	25 (80.6%)	**64 (51.6%)**
	Female	48 (51.6%)	5 (16.1%)	**53 (42.7%)**
	Other	6 (6.5%)	0 (0%)	**6 (4.8%)**
	DNA	0 (0%)	1 (3.2%)	**1 (0.8%)**
Difference between self- and parent-defined gender				
	No	85 (91.4%)	30 (96.8%)	**115 (92.7%)**
	Yes	6 (6.5%)	0 (0%)	**6 (4.8%)**
	DNA	2 (2.2%)	1 (3.2%)	**3 (2.4%)**
Sexual orientation				
	Bisexual	22 (23.7%)	6 (19.4%)	**28 (22.6%)**
	Heterosexual/straight	60 (64.5%)	21 (67.7%)	**81 (65.3%)**
	Gay/lesbian	3 (3.2%)	3 (9.7%)	**6 (4.8%)**
	Other	8 (8.6%)	1 (3.2%)	**9 (7.3%)**
Ethnicity				
	White-British	77 (82.8%)	27 (87.1%)	**104 (83.9%)**
	Other	16 (17.2%)	4 (12.9%)	**20 (16.1%)**
Primary carer education				

		Non-HSB sample n=93, 75% Number (%) *unless otherwise stated*	HSB sample n=31, 25% Number (%) *unless otherwise stated*	**All participants N=124** ***unless otherwise stated***
	Didn't finish secondary school	5 (5.4%)	0 (0%)	**5 (4%)**
	Finished secondary school	43 (46.2%)	12 (38.7%)	**55 (44.4%)**
	University/higher education	45 (48.4%)	19 (61.3%)	**64 (51.6%)**
Type of school				
	Academy	18 (19.4%)	8 (25.8%)	**26 (21%)**
	Private	16 (17.2%)	7 (22.6%)	**23 (18.5%)**
	State	54 (58.1%)	14 (45.2%)	**68 (54.8%)**
	Other	3 (3.2%)	2 (6.5%)	**5 (4%)**
	DNA	2 (2.2%)	0 (0%)	**2 (1.6%)**
Level of learning support				
	Mainstream	83 (89.2%)	21 (67.7%)	**104 (83.9%)**
	Additional/specialist	10 (10.8%)	9 (29%)	**19 (15.3%)**
	DNA	0 (0%)	1 (3.2%)	**1 (0.8%)**
Childhood maltreatment	Mean (SD)	11.97 (5.40)	14.42 (5.94)	**12.58 (5.62)**
Subject to HSB from others				
	No	66 (71%)	11 (35.5%)	**77 (62.1%)**
	Yes	27 (29%)	20 (64.5%)	**47 (37.9%)**
Previous involvement in fights				
	No	47 (50.5%)	10 (32.3%)	**57 (46%)**
	Yes	46 (49.5%)	21 (67.7%)	**67 (54%)**
Availability of supportive figure when needed				
	Never/once	19 (20.4%)	2 (6.5%)	**21 (16.9%)**
	Sometimes	21 (22.6%)	11 (35.5%)	**32 (25.8%)**
	Often/always	51 (54.8%)	18 (58.1%)	**69 (55.6%)**

SD = standard deviation, DNA = did not answer

Table 4.
Participants' pornography use (N=124).

		Non-HSB sample n=93, 75% Number (%) *unless otherwise stated*	HSB sample n=31, 25% Number (%) *unless otherwise stated*	**All participants N=124 *unless otherwise stated***
Viewed pornography (N=124)				
	No	17 (18.3%)	2 (6.5%)	**NPG: 19 (15.3%)**
	Yes	76 (81.7%)	29 (93.5%)	**PG: 105 (84.7%)**
Viewed 'Aggressive' Porn (n=105)				
	No	45 (59.2%)	6 (20.7%)	**51 (48.6%)**
	Yes	27 (35.5%)	18 (62.1%)	**45 (42.9%)**
	DNA	4 (5.3%)	5 (17.2%)	**9 (8.6%)**

Rates of and Associations with HSB

In total, 31 YP (25%) were known to services or self-reported perpetrating HSB. Only four factors were significantly associated with perpetrating HSB (Table 6; Appendix AG): being male and having experienced HSB from others, both medium effects; plus additional learning support in school and childhood maltreatment, both small effects. These accounted for 12.9%, 10%, 5.2%, and 6.6% of group allocations, respectively.

Associations between Features of Pornography Use and HSB

Few features of pornography use were associated with HSB (Table 7). These were: high personal importance of pornography (medium effect); and viewing pornography more frequently and pornography being more representative with personal ideal of sex (both small effects). These accounted for 14.7%, 8.1% and 6% of group allocations, respectively.

Both groups predominantly watched pornography online, sourced it themselves, used a personal device, and watched pornography for sexual excitement (no significant differences between groups; all *p*s>.130, Cramer's *V*s<.170; Appendix AH).

Table 5.
Associations between demographic characteristics and viewing pornography.

		Non-pornography sample n = 19 (15.3%) Number (%) *unless otherwise stated*	Pornography sample N = 105 (84.7%) Number (%) *unless otherwise stated*	**All participants n=124 *unless otherwise stated***	Statistics			
					Chi-square (χ^2) or Mann-Whitney U (*U*)	*df*	*p*	Effect size[§]
Age	Mean (SD)	17.68 yrs (1.77)	17.99 yrs (1.75)	**17.94 yrs (1.75)**	-	-	.242[1]	r_{pb} = .063
Gender (n = 123)					χ^2 = 3.91	2	.143	*V* = .178
	Male	6 (31.6%)	58 (55.8%)	**64 (52%)**				
	Female	12 (63.2%)	41 (39.4%)	**53 (43.1%)**				
	Other	1 (5.3%)	5 (4.8%)	**6 (4.9%)**				
	Yes	1 (5.4%)	5 (4.9%)	**6 (5%)**				
Sexual orientation					χ^2 = 8.45†	3	**.025***	***V* = .231**
	Bisexual	0 (0%)	28 (36.7%)	**28 (22.6%)**				
	Heterosexual/straight	16 (84.2%)	65 (61.9%)	**81 (65.3%)**				
	Gay/lesbian	1 (5.3%)	5 (4.8%)	**6 (4.8%)**				
	Other	2 (10.5%)	7 (6.7%)	**9 (7.3%)**				
Ethnicity					χ^2 = 0.002†	1	1.00	*V* = .004
	White-British	16 (84.2%)	88 (83.8%)	**104 (83.9%)**				
	Other	3 (15.8%)	17 (16.2%)	**20 (16.1%)**				
Primary carer's education					χ^2 = 0.49†	2	.916	*V* = .030
	Didn't finish secondary school	1 (5.3%)	4 (3.8%)	**5 (4%)**				
	Finished secondary school	8 (42.1%)	47 (44.8%)	**55 (44.4%)**				
	University/higher education	10 (52.6%)	54 (51.4%)	**64 (51.6%)**				
Type of school (n = 122)					χ^2 = 2.51†	3	.446	*V* = .162
	Academy	3 (15.8%)	23 (22.3%)	**26 (21.3%)**				
	Private	6 (31.6%)	17 (16.5%)	**23 (18.9%)**				
	State	10 (52.6%)	58 (56.3%)	**68 (55.7%)**				
	Other	0 (0%)	5 (4.9%)	**5 (4.1%)**				
Level of learning support (n = 123)					χ^2 = 0.54†	1	.492	*V* = .066

		Non-pornography sample n = 19 (15.3%) Number (%) *unless otherwise stated*	Pornography sample N = 105 (84.7%) Number (%) *unless otherwise stated*	**All participants n=124 *unless otherwise stated***	Statistics			
					Chi-square (χ^2) or Mann-Whitney U (*U*)	*df*	*p*	Effect size[§]
	Mainstream	15 (78.9%)	89 (85.6%)	**104 (84.6%)**				
	Additional/specialist	4 (21.1%)	15 (14.4%)	**19 (15.4%)**				
Childhood maltreatment	Mean (SD)	11.32 (4.74)	12.81 (5.75)	**12.58 (5.62)**	*U* = 825.5	-	.226	*r* = -.109
HSB from others								
	No	16 (84.2%)	61 (58.1%)	**77 (62.1%)**	χ^2 = 4.66	1	**.039***	***V* =.194**
	Yes	3 (15.8%)	44 (41.9%)	**47 (37.9%)**				
Previous fights					χ^2 = 2.67	1	.134	*V* =.147
	No	12 (63.2%)	45 (42.9%)	**57 (46%)**				
	Yes	7 (36.8%)	60 (57.1%)	**67 (54%)**				
Availability of supportive figure (n = 122)					χ^2 = 0.52[†]	2	.789	*V* =.059
	Never/once	4 (21.1%)	17 (16.5%)	**21 (17.2%)**				
	Sometimes	4 (21.1%)	28 (27.2%)	**32 (26.2%)**				
	Often/always	11 (57.9%)	58 (56.3%)	**69 (56.6%)**				

SD = standard deviation

[1] = one-tailed test

[§] *V* = Cramer's *V*; r = correlation coefficient; r_{pb} = point biserial correlation coefficient

[†] Fisher's exact probability used as more than 20% of cells had an expected count <5

** significant at p = .05*

Table 6.
Associations between demographic characteristics and HSB.

		Non-HSB sample n=93, 75% Number (%) *unless otherwise stated*	HSB sample n=31, 25% Number (%) *unless otherwise stated*	**All participants n=124 *unless otherwise stated***	Statistics			
					Chi-square (χ^2) or Mann-Whitney U (*U*)	*df*	*p*	Effect size[§]
Age	Mean (SD)	17.90 yrs (1.87)	18.06 yrs (1.37)	**17.94 yrs (1.75)**	*U* = 1258.5	-	.280	*r* = -.097
Gender (n = 123)					χ^2 = 15.49[†]	2	**<.001***	***V* = .359**
	Male	39 (41.9%)	25 (83.3%)	**64 (51.6%)**				
	Female	48 (51.6%)	5 (16.7%)	**53 (42.7%)**				
	Other	6 (6.5%)	0 (0%)	**6 (4.8%)**				
Sexual orientation					χ^2 = 2.90[†]	3	.396	*V* = .159
	Bisexual	22 (23.7%)	6 (19.4%)	**28 (22.6%)**				
	Heterosexual/straight	60 (64.5%)	21 (67.7%)	**81 (65.3%)**				
	Gay/lesbian	3 (3.2%)	3 (9.7%)	**6 (4.8%)**				
	Other	8 (8.6%)	1 (3.2%)	**9 (7.3%)**				
Ethnicity					χ^2 = 0.32	1	.779	*V* = .051
	White-British	77 (82.8%)	27 (87.1%)	**104 (83.9%)**				
	Other	16 (17.2%)	4 (12.9%)	**20 (16.1%)**				
Primary carer's education					χ^2 = 2.16[†]	2	.301	*V* = .148
	Didn't finish secondary school	5 (5.4%)	0 (0%)	**5 (4%)**				
	Finished secondary school	43 (46.2%)	12 (38.7%)	**55 (44.4%)**				
	University/higher education	45 (48.4%)	19 (61.3%)	**64 (51.6%)**				
Type of school (n = 122)					χ^2 = 2.53[†]	3	.472	*V* = .131
	Academy	18 (19.8%)	8 (25.8%)	**26 (21.3%)**				
	Private	16 (17.6%)	7 (22.6%)	**23 (18.9%)**				
	State	54 (59.3%)	14 (45.2%)	**68 (55.7%)**				
	Other	3 (3.3%)	2 (6.5%)	**5 (4.1%)**				
Level of learning support (n = 123)					χ^2 = 6.43[†]	1	**.019***	***V* = .229**
	Mainstream	83 (89.2%)	21 (70%)	**104 (83.9%)**				
	Additional/specialist	10 (10.8%)	9 (30%)	**19 (15.3%)**				

		Non-HSB sample n=93, 75% Number (%) *unless otherwise stated*	HSB sample n=31, 25% Number (%) *unless otherwise stated*	**All participants n=124 *unless otherwise stated***	Statistics			
					Chi-square (χ^2) or Mann-Whitney U (*U*)	*df*	*p*	Effect size[§]
Childhood maltreatment	Mean (SD)	11.97 (5.40)	14.42 (5.94)	**12.58 (5.62)**	*U* = 951.5		**.004***	*r* = -.257
HSB from others					χ^2 = 12.41	1	**.001***	***V* = .317**
	No	66 (71%)	11 (35.5%)	**77 (62.1%)**				
	Yes	27 (29%)	20 (64.5%)	**47 (37.9%)**				
Previous fights					χ^2 = 3.13	1	.097	*V* = .159
	No	47 (50.5%)	10 (32.3%)	**57 (46%)**				
	Yes	46 (49.5%)	21 (67.7%)	**67 (54%)**				
Availability of supportive figure (n = 122)					χ^2 = 4.17	2	.119	*V* = .185
	Never/once	19 (20.4%)	2 (6.5%)	**21 (16.9%)**				
	Sometimes	21 (22.6%)	11 (35.5%)	**32 (25.8%)**				
	Often/always	51 (54.8%)	18 (58.1%)	**69 (55.6%)**				

SD = standard deviation

[§] *V* = Cramer's *V*; r = correlation coefficient

[†] Fisher's exact probability used as more than 20% of cells had an expected count <5

** significant at p = .05*

Table 7.

Associations between features of pornography use and HSB, for those participants who had viewed pornography (n=105).

	Non-HSB sample n=76, 72.4%	HSB sample n=29, 27.6%	**All participants who watched pornography (n=105)**	Statistics			
				Chi-square (χ^2)	*df*	*p*	Effect size
	Number (%) *unless otherwise stated*	Number (%) *unless otherwise stated*	**Number (%) *unless otherwise stated***	or Mann-Whitney U (*U*)			Cramer's *V* (*V*)
Age first viewed (n = 105)							
Mean (SD)	13.29 yrs (2.44)	13.76 yrs (2.46)	**13.42 yrs (2.45)**	*U* = 944	-	.253	*r* = -.112
Mode	12	15	**15**				
Range	7-19	7-19	**7-19**				
Frequency of viewing (n = 104)				χ^2 = 7.68	3	**.049***	***V* = .284**
Monthly or less	14 18.7%)	2 (6.9%)	**16 (15.4%)**				
Weekly/fortnightly	12 (16%)	4 (13.8%)	**16 (15.4%)**				
Multiple times/wk	37(49.3%)	11 (37.9%)	**48 (46.2%)**				
Daily or more	12 (16%)	12 (41.4%)	**24 (23.1%)**				
Average duration (n = 104)				χ^2 = 3.72	2	.141	*V* = .189
<15 mins	36 (48%)	8 (27.6%)	**44 (42.3%)**				
15-30mins	30 (40%)	17 (58.6%)	**47 (45.2%)**				
30mins+	9 (12%)	4 (13.8%)	**13 (12.5%)**				
Personal importance of pornography (n = 104)				χ^2 = 15.34	2	**< .001***	***V* = .384**
Not important	46(61.3%)	7 (24.1%)	**53 (51%)**				
Neutral	15 (20%)	6 (20.7%)	**21 (20.2%)**				
Important	14(18.7%)	16 (55.2%)	**30 (28.8%)**				
Extent pornography represents personal ideal sex				χ^2 = 6.25	2	**.050***	***V* = .244**
Not representative	33 (43.4%)	8 (27.6%)	**41 (39%)**				
Neutral	21 (27.6%)	5 (17.2%)	**26 (24.8%)**				
Representative	22 (28.9%)	16 (55.2%)	**38 (36.2%)**				

SD = standard deviation

Associations between Viewing Pornography and HSB

No association was found between pornography and HSB (Fisher's Exact p=.092; one-tailed test, Cramer's V=.142). However, a significant association was found between AP and HSB (χ^2=10.1, p=.001, df=1, Cramer's V=.325; one-tailed test), with AP accounting for 10.6% of group allocation.

Potential Mediators in the Relationship between Pornography and HSB

All pornography and HSB. Only sexual attitudes and sexual objectification were explored as potential mediators, as there was no data regarding emotional response, sexual arousal or addictiveness for those that had not viewed pornography (Table 8). Associations between the proposed mediators, pornography (predictor), and HSB (outcome) were explored. Both sexual attitudes and sexual objectification were significantly correlated with pornography and HSB, although pornography and HSB were not significantly associated (Table 8).

Separate mediational models were run with sexual attitudes and sexual objectification as mediators. Both models were significant for partial mediation (Figures 2-3; Table 9; Appendix AI).

Aggressive pornography and HSB. Emotional response, sexual arousal, addictiveness, sexual attitudes and sexual objectification were explored as potential mediators, using data from the subset of participants who had both viewed pornography and provided data regarding AP (n = 96; Table 8).

Associations between the proposed mediators, AP (predictor) and HSB (outcome) were explored. AP and HSB were significantly associated. Neither sexual attitudes nor any emotional responses were significantly associated with AP, thus they were excluded from further analysis. Sexual arousal, addictiveness and sexual objectification were all significantly associated with both AP and HSB.

Separate mediational models were run with sexual arousal, addictiveness and sexual objectification as mediators. All models were significant for partial mediation (Table 10; Figures 4-6; Appendix AJ).

Table 8.

Data regarding participants' response to mediator variables, for a) the whole sample; and b) those who had viewed pornography.

Whole Sample				
		Non-HSB sample n=93, 75% Number (%) *unless otherwise stated*	HSB sample n=31, 25% Number (%) *unless otherwise stated*	**All participants N=124** ***unless otherwise stated***
Sexual attitudes (BSAS-PI) – Mean (SD)		44.14 (11.54)	51.07 (10.40)	45.88 (11.62)
Sexual objectification (ISOS-P) – Mean (SD)		1.76 (0.50)	2.34 (0.69)	1.90 (0.60)
Pornography sub-sample				
		Non-HSB sample n=76, 72% Number (%) *unless otherwise stated*	HSB sample n=29, 28% Number (%) *unless otherwise stated*	**All participants n=105** ***unless otherwise stated***
Sexual attitudes (BSAS-PI) – Mean (SD)		46.75 (10.59)	51.84 (10.21)	48 (10.69)
Sexual objectification (ISOS-P) – Mean (SD)		1.83 (0.51)	2.34 (0.69)	1.97 (0.61)
Porn addictiveness (CPUI-A-M) – Mean (SD)		3.10 (1.14)	4.35 (0.98)	3.44 (1.23)
Sexual arousal to pornography				
	None	10 (13.2%)	1 (3.4%)	11 (10.5%)
	Somewhat	18 (23.7%)	0 (0%)	18 (17.1%)
	Very	48 (63.2%)	28 (96.6%)	76 (72.4%)
Emotional arousal to pornography (n = 104)				
	Neutral	32 (42.7%)	19 (65.5%)	51 (49%)
	Angry/confused	17 (22.7%)	4 (13.8%)	21 (20.2%)
	Aroused/excited	62 (82.7%)	27 (93.1%)	89 (85.6%)
	Happy/interested	38 (50.7%)	22 (75.9%)	60 (57.7%)
	Shame/regret	39 (52%)	12 (41.4%)	51 (49%)

Table 9.

Logistic regression analysis assessing the mediational effects of sexual attitudes and sexual objectification in the relationship between viewing pornography and displaying HSB.

Step	Equation Variables	Pre-model tests of association	Mediational model				
			Coeff or effect	SE	Significance level	95% Confidence Intervals	
						Lower	Upper
1	Pornography → HSB	Fisher's exact p=.092, Cramer's V=.142; one-tailed test					
2	Pornography → Sexual attitudes	r_{pb} = .46, p < .001	1.03	0.14	<.001	0.746	1.311
	Pornography → Sexual objectification	U = 457.5, p < .001, r = .337	0.11	0.03	<.001	0.057	0.162
3	Sexual attitudes → HSB	r_{pb} = .249, p = .006	1.00	0.37	.007	0.276	1.725
	Sexual objectification → HSB	U = 716, p = < .001, r = .376)	7.82	1.98	<.001	3.944	11.694
4	Pornography → Sexual attitudes → HSB	-	1.029	0.43[1]	-	0.344	2.017
	Pornography → Sexual objectification → HSB	-	0.855	0.28[1]	-	0.403	1.533

[1] Bootstrapped SE

Table 10.

Logistic regression analysis assessing the mediational effects of sexual arousal, pornography addictiveness and sexual objectification in the relationship between viewing aggressive pornography and displaying HSB.

Step	Equation Variables	Pre-model tests	Mediational model				
			Coeff or effect	SE	Significance level	95% Confidence Intervals	
						Lower	Upper
1	AP → HSB	χ^2=10.1, *p*=.001, *df*=1, Cramer's *V*=.325; one-tailed test					
2	AP → Emotion: neutral	χ^2 = 2.94, df = 1, p = .102, Cramer's V = .176	-	-	-	-	-
	AP → Emotion: angry/confused	χ^2 = 1.06, df = 1, p = .442, Cramer's V = .105	-	-	-	-	-
	AP → Emotion: aroused/excited	χ^2 = 1.67, df = 1, p = 241, Cramer's V = .132	-	-	-	-	-
	AP → Emotion: happy/interested	χ^2 = 0.002, df = 1, p = 1.0, Cramer's V = .004	-	-	-	-	-
	AP → Emotion: shame/regret	χ^2 = 0.51, df = 1, p = .540, Cramer's V = .073	-	-	-	-	-
	AP → Sexual attitudes	r_{pb} = .169, *p* = .100	-	-	-	-	-
	AP → Sexual arousal	χ^2 = 8.88, df = 2, *p* = .01, Cramer's V = .304	0.41	0.13	.003	0.143	0.673
	AP → Pornography addictiveness	r_{pb} = 1.0, *p* <.001	0.90	0.24	.001	0.427	1.366
	AP → Sexual objectification	*U* = 743.5, *p* = .003, *r* = -.303	0.08	0.02	.003	0.028	0.125

Step	Equation Variables	Pre-model tests	Mediational model				
			Coeff or effect	SE	Significance level	95% Confidence Intervals	
						Lower	Upper
3	Sexual arousal → HSB	Fisher's exact p = .002, Cramer's V = .332	1.36	0.71	.054	-0.021	2.749
	Pornography addictiveness → HSB	r_{pb} = .465, p <.001	0.98	0.28	.001	0.425	1.531
	Sexual objectification → HSB	r_{pb} = .347, p = .002	5.71	2.27	.012	1.258	10.169
4	AP → Sexual arousal → HSB	-	0.556	2.92[1]	-	0.404	8.726
	AP → Pornography additiveness → HSB	-	0.877	0.41[1]	-	0.206	1.818
	AP → Sexual objectification → HSB	-	0.436	0.24[1]	-	0.106	1.071

[1] Bootstrapped SE

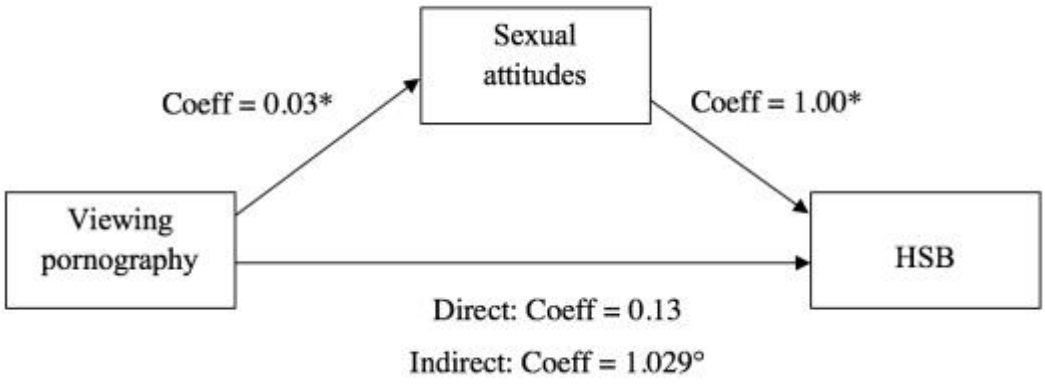

Figure 2. Model of the mediating role of sexual attitudes in the relationship between viewing pornography and HSB. * = *Significant at p = .05;* ° = *Partial mediation.*

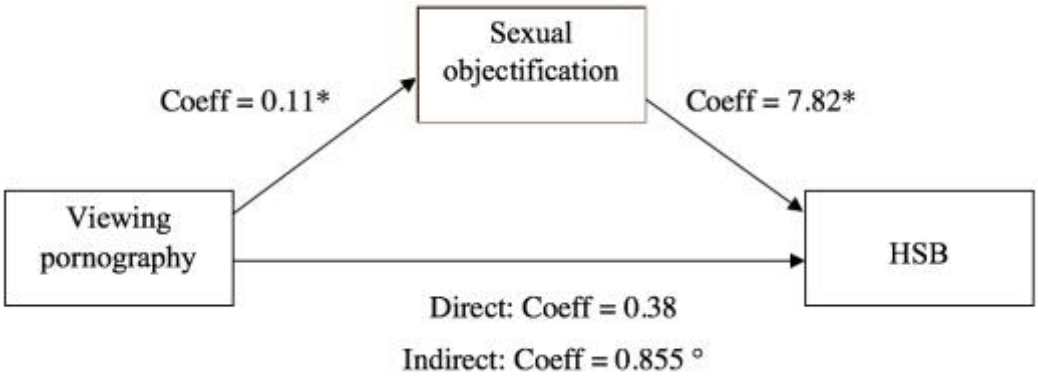

Figure 3. Model of the mediating role of sexual objectification in the relationship between viewing pornography and HSB. * = *Significant at p = .05;* ° = *Partial mediation.*

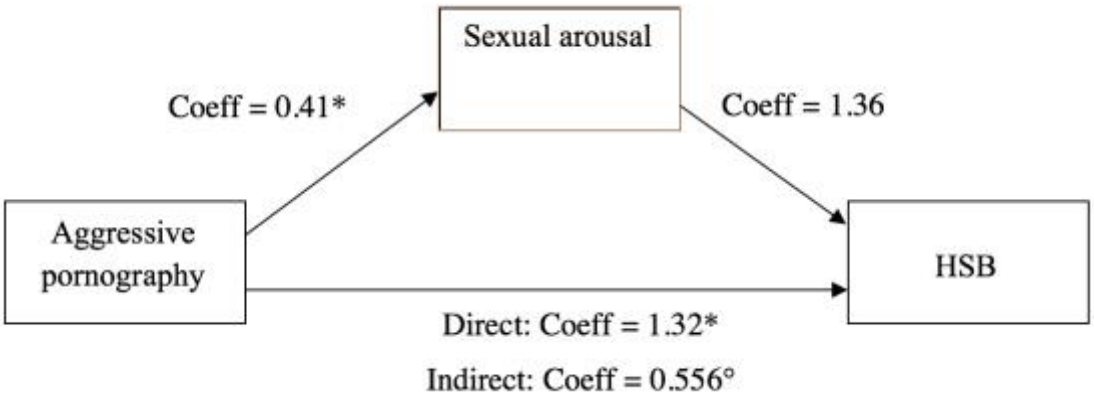

Figure 4. Model of the mediating role of sexual arousal in the relationship between viewing aggressive pornography and HSB. * = *Significant at p = .05;* ° = *Partial mediation.*

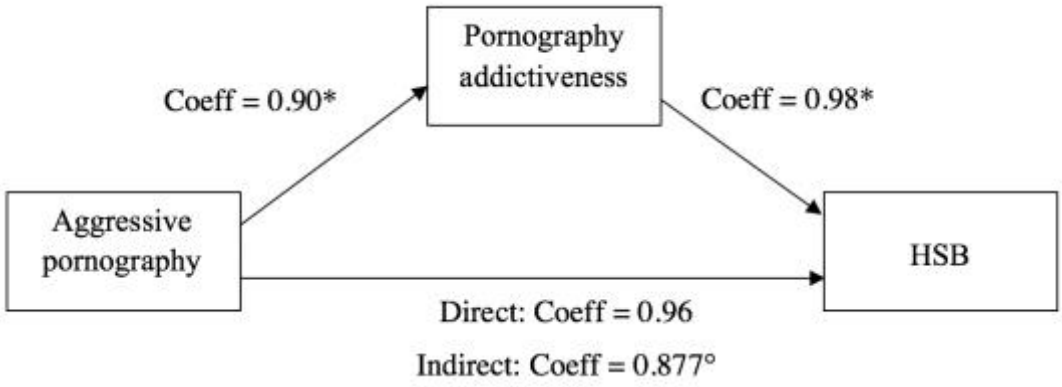

Figure 5. Model of the mediating role of pornography addictiveness in the relationship between viewing aggressive pornography and HSB. ** = Significant at p = .05; ° = Partial mediation.*

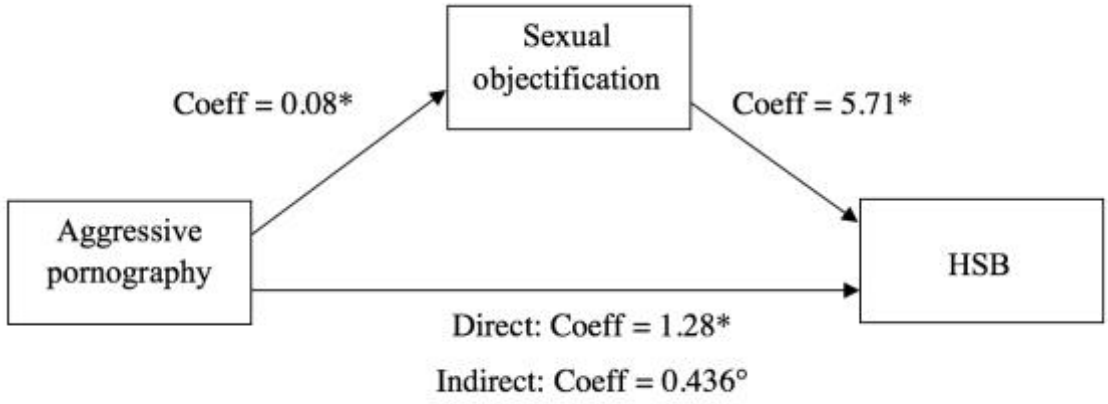

Figure 6. Model of the mediating role of sexual objectification in the relationship between viewing aggressive pornography and HSB. ** = Significant at p = .05; ° = Partial mediation.*

Discussion

The current study explored associations between pornography use and HSB in YP aged 16-21 within the UK. In particular, this study aimed to explore differences in susceptibility variables (demographic characteristics) between those who did and did not use pornography and those who did and did not display HSB; and examine the role of sexually-relevant cognitive, physiological, behavioural and emotional factors as potential mediators in the relationship between pornography use and HSB, thus providing evidence towards some of the propositions made by the DSMM (Valkenburg & Peter, 2013; Peter & Valkenburg, 2016). Within the current sample, approximately 85% of individuals reported exposure to pornography. This is in the upper range compared to other studies (Horvath, 2013) but likely reflects the older age group in this study.

Consistent with our hypotheses, our HSB sample was mostly male, more likely to have additional learning needs, and had experienced more childhood maltreatment and HSB (vs. non-HSB sample). These trends resemble those from a much larger HSB sample (Hackett et al., 2013), indicating representativeness of the clinical population, despite largely community-based recruitment. However, we found no difference in history of aggression between HSB and non-HSB groups. Frequency of exposure to pornography (but not duration) was higher in the HSB sample, while age of first exposure was not correlated with HSB, contrary to previous findings (Brown & Engle, 2009; Burton et al., 2010). This may result from methodological differences, as we used retrospective reporting and a continuous age scale (not longitudinal approach and/or an 'early age' cut-off).

Within this study, we did not find significant differences between the HSB and non-HSB groups on numerous other demographic variables (e.g., age, ethnicity, sexual orientation), nor regarding features of pornography use. Unsurprisingly most YP accessed pornography online using a personal device. Contrary to a recent UK study (Martellozzo et al., 2017), we found that intentionally seeking pornography was much more common than accidental exposure (95% vs. 27% of sample), although this may reflect age differences in samples. Predominant reasons for accessing pornography were sexual excitement and curiosity, akin to Wallmyr (2006).

Pornography's personal importance and representativeness of the individual's 'ideal sex' were higher in the HSB sample (accounting for 14.7% and 6% of group variance, respectively). As pornography provides a poor model for appropriate sexual encounters (American Psychological Association, 2008; Bridges et al., 2010; Klassen & Peter, 2014; Martellozzo et al, 2017; Vannier et al., 2014) it is possible that HSB may reflect individuals emulating aspects of what they have seen; although alternatively HSB may precede pornography use.

We explored numerous demographic characters as susceptibility factors for pornography use, thus providing evidence for proposition one of the DSMM. Contrary to previous findings, we found no effect of gender or current age on pornography exposure (Horvath, 2013; Martellozzo et al., 2017; Peter & Valkenburg, 2016); possibly due to inclusion of a third gender category and an older sample. In our sample first exposure occurred from 7 with a mean of 13 years, suggesting that exposure is occurring earlier than previously; prior to 13 was rare in earlier work (Brown & Engle, 2009; Sabina et al., 2008)

but prior to 14 years was typical in more recent (Martellozzo et al., 2017). Such a trend could be concerning, given that little is currently known about how developmentally inappropriate exposure to sexual material may impact on YP (Hollis & Belton, 2017). Thus, replication of the current research with younger YP may reveal other associations.

Interestingly, we found higher rates of bisexual participants in the PG (vs. NPG), which may reflect searches for information about sex and sexuality (Hillier, Mitchell, & Ybarra, 2012; Slavtcheva-Petkova et al., 2015), with schools focused on heterosexuality (Abbott, Ellis, & Abbott, 2015; Klesse, 2016). A history of aggression appears to be susceptibility factor for use of AP in particular, but not pornography in general, which may indicate individuals with pre-existing aggressive tendencies seeking out AP (Owens et al., 2012), although we cannot determine causality. Consistent with previous studies, we found that demographic features such as ethnicity, parental education and type of school did not differentiate pornography use (Romito & Beltramini, 2015; Svedin et al. 2011).

Pornography use was higher in those who have experienced HSB from others (effect size, *V*=.317), but there was no effect of broader childhood maltreatment, contrary to previous findings (Peter & Valkenburg, 2016). As viewing pornography is linked with sexual behaviours and preoccupation (Braun-Courville & Rojas, 2009; Bridges et al., 2016; Peter & Valkenburg, 2008), it might be that higher overall sexual activity (not pornography) increases the risk of HSB from others. However, being a victim of HSB was also significantly higher in the HSB vs. non-HSB sample thus it may be possible that victimisation impacts on increased sexual activity and pornography use. However, our data cannot determine causality and we did not capture sexual activity.

There was no overall relationship between pornography and HSB, but there was an effect of AP. This reinforces previous findings of a specific link between violent pornography, rather than pornography per se, and HSB (Owens et al., 2012; Seto & Lalumiere, 2010; Ybarra et al., 2011), yet contradicts Wright et al.'s (2016) finding that viewing any pornography is associated with HSB. This highlights on-going complexities in the field, which may in part result from methodological issues. Most studies included in Wright et al.'s meta-analysis were non-specific regarding pornography content thus it is possible that they included violent content, which may account for the authors finding a significant pornography-sexual aggression link even in those studies not specifying violent content. If this is the case, this would suggest that risk of exposure to generic pornography

does not equal risk of sexual aggression, although we cannot comment on other potential harmful outcomes.

We also explored the role of multiple factors as mediators in the relationship between AP and HSB, thus providing evidence for proposition two of the DSMM. The role of sexual arousal and addictiveness as mediators raises interesting questions about how AP may be particularly arousing and addictive for some YP, who are more likely to display HSB. As with previous research, our cross-sectional design does not allow us to disentangle causality. Previous studies have suggested that viewing AP may reflect delinquent and aggressive tendencies (Alexy, Burgess, & Prentky, 2009; Malamuth & Huppin, 2005; Ybarra & Mitchell, 2005). This is partially supported; however, aggression did not differ between HSB and non-HSB samples. This suggests the relationship is complex and causality remains unknown. Notably, aggression in the current study was restricted to physical fighting, failing to encompass broader aspects possibly linked with sexual aggression (e.g., coercion, hostility, aggressive attitudes; Malamuth et al., 2000; Malamuth & Huppin, 2005).

The non-emergence of emotional responses as a mediator between pornography and HSB is interesting, and raises questions as to whether emotional responses may have a more distinct role in the occurrence of other harms associated with pornography rather than HSB. The indirect association between pornography and HSB via (permissive and utilitarian) sexual attitudes and sexual objectification highlights the importance of attitudinal and behavioural responses associated with pornography, rather than pornography itself. Interestingly, sexual attitudes did not mediate the AP-HSB association. In contrast, sexual objectification remained a significant predictor when comparing pornography subtypes, indicating that there may be something distinct about AP that uniquely affects sexual objectification and, in turn, HSB.

Overall, regarding the DSMM's proposition that cognitive, emotional and excitative response states mediate the relationship between pornography use and HSB, we found partial support for cognitive factors (sexual attitudes) and physiological excitation (sexual arousal), but not for emotional responses. In addition, we found support for two behavioural factors as partial mediators: pornography addictiveness and sexual objectification.

Clinical Implications

The current findings demonstrate that generic pornography is not directly associated with HSB. However, more needs to be known about impact on younger children. Given that

pornography was considered more representative of 'ideal sex' in the HSB group, this reinforces the importance of good education to challenge pornography, particularly AP, as a realistic representation (or 'script'; Simon & Gagnon, 2013; Wright 2014) of typical/acceptable sexual encounters and highlighting issues of consent. This may go some way to tackle the permissive sexual attitudes and objectifying behaviours that increase the likelihood of HSB. Beyond pornography, broader education about sexual encounters (encompassing non-heterosexuality) should seek to encompass not only the physical, but attitudinal aspects of sexual encounters.

Given that importance of pornography accounted for the most variance between the HSB and non-HSB groups, this also raises questions about the broader lifestyle options of those engaging in HSB and whether pornography is important by choice or lack of other opportunities, bearing in mind negative associations previously found between pornography use and social integration/conduct (Owens et al., 2012). Broader lifestyle interventions may therefore be beneficial in reducing one's risky engagement with pornography.

Finally, in accordance with the DSMM, these findings provide guidance to professionals and family members of YP regarding potential risk factors for pornography use and HSB, and mediators of the impact of pornography on HSB. Attunement to sexual attitudes and objectifying behaviours might help to identify those at increased risk of HSB; while the types of pornography YP viewed (i.e., AP) and the compulsivity with which they do so may also be important indicators.

Limitations

The current sample was predominantly recruited online, thus self-selecting and may differ from the wider population of YP. Identification of HSB largely relied on self-report; however, the HSB sample's demographic profile reflected that of confirmed clinical samples (Hackett et al., 2013). It would have been interesting to explore differences between self-reported and service-identified HSB, but the current sample was too small. Additionally, service involvement is ultimately an arbitrary indicator of HSB, neglecting unreported or sub-threshold behaviour. We note that the relatively small HSB sample size will likely have limited the power of analyses for this group.

This study was cross-sectional and some elements relied on retrospective reporting, which prevents us from drawing conclusions about causality. However, experimental manipulation would have been unethical (exposing YP to pornography), while a longitudinal

approach was beyond this study's scope. Had additional temporal information been collected, for example regarding first committing HSB vs. first viewing pornography. this may have enabled us to make some inferences regarding causality. Without this information, it is not possible to distinguish whether the evidence here truly reflects the role of pornography use in HSB, or rather the role of HSB in pornography use, both of which would be accommodated by the transactional components of the DSMM framework.

Finally, the current sample encompassed older YP (latter adolescence/early adulthood), due to ethical and practical difficulties in exploring these topics with younger children/adolescence, thus cannot be assumed to be representative of younger YP.

The key strengths of this study lie in its novel exploration of mediational factors and its utility in providing an explicit examination of components of a theoretically-grounded framework (DSMM). To build on the current findings, future research should consider the role of other potential mediators, and whether the current mediators maintain their effects with younger samples.

Conclusion

The role of the internet in YP's lives is surely here to stay and the challenge remains to protect and educate YP without unnecessarily restricting their online opportunities (Duerager & Livingstone, 2012; Livingstone & Helsper, 2008; Rallings, 2015). This study demonstrates that risk of exposure to pornography does not inevitably mean risk of harm (related to HSB at least; we did not explore other harms). This study's unique exploration of potential mediators has shown that as well as sexual arousal, attitudinal and behavioural factors mediate the relationship between exposure to pornography and HSB, thus interventions should target change in these areas; while education and broader awareness of these factors should be cultivated for prevention. Current and previous findings of the unique effect of aggressive pornography on HSB indicates the potential benefits of restricting YP's access to particular types of content. However, as in previous studies the factors explored were found to contribute only a proportion of variance in pornography use and HSB, suggesting a much broader number of variables are likely to influence both behaviours.

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Executive Summary of Main Research Project

Young people (YP) are spending more time online than ever for before, with many having their own personal internet devices. This increases the likelihood of exposure to many online risks, including online pornography. Considerable research has demonstrated relatively high rates of exposure among young people, yet exposure does not inevitably equate to harm.

Research (largely conducted in the United States) has shown pornography to be associated with a number of possible harms, including stress and emotional distress, body image concerns, change in sexual attitudes, behavioural difficulties, and engaging in risky sexual behaviour. One harm that has received particular attention is harmful sexual behaviour (HSB). Previous literature has demonstrated links between pornography and HSB, although these are unclear. Some studies suggest that only violent pornography is linked with HSB.

However, many YP report positive responses to pornography and it can serve as a source of information regarding sex, sexuality, and issues they might find difficult to discuss with adults, thus preventing access may have disadvantages for some. Furthermore, trying to restrict young people's access to online material often results in limiting their overall internet access, which can be counterproductive in other areas.

In recent years, several models have been proposed to integrate findings regarding the links between pornography use and associated outcomes, including HSB, such as the Differential Susceptibility to Media Effects Model (DSMM; Valkenburg & Peter, 2013). Further testing of such models may help us to better understand the impact of pornography, and identify potential avenues for intervention.

Aims

In this research, we sought to better understand the relationship between viewing pornography and HSB in YP. In particular, we wanted to understand whether certain factors mediate the relationship between pornography and HSB, i.e. increase the likelihood of an effect. Within this study, we also hoped to provide up-to-date data on features of pornography use within a UK community and HSB sample.

Research Questions

- What are the rates of pornography use in community and HSB samples in the UK?
- Do personal characteristics affect the likelihood that an individual will:
    a) View pornography?
    b) Display HSB?
- Is there a relationship between exposure to (violent) pornography and HSB in young people?
- Are particular features of pornography use associated with HSB?
- Do sexually-relevant psychological, physiological, behavioural and cognitive factors mediate the relationship between exposure to pornography and HSB?

Method

We recruited 124 YP aged 16-21 to complete a set of online questionnaires. Approximately half were female (51.6%), 42.7% were male, and the rest identified as other genders (4.8%). The average age was 17.94 years (SD = 1.75, mode =17). Participants were recruited online and through specialist services for HSB. 93 participants were identified as the non-HSB sample, and 31 as the HSB sample (because they had received input from a HSB service or they reported having engaged in sexual behaviour where consent was lacking or unclear, posing risk of harm to another).

Participants completed questions about their lives and pornography use; how they feel after watching pornography (emotional response); how sexually aroused they feel when watching pornography; their sexual attitudes (using subscales of the Brief Sexual Attitudes Scale); their behaviour that sexually objectifies others (using the Interpersonal Sexual Objectification Scale – Perpetrator Version); and their addictiveness to pornography (using a modified version of the Cyber Pornography Use Inventory – Addictive Patterns Subscale).

Key Findings

- The majority of YP had viewed pornography before (84.7%), and 42.9% had viewed aggressive, non-consenting or coercive pornography (‘aggressive pornography’). Most watched pornography online; on a personal device; for sexual excitement; having searched for it themselves.
- YP were more likely to have watched pornography if they were bisexual or had experienced HSB from other people. YP who watched aggressive pornography were more likely to have been involved in fights before.

- The HSB sample were more likely to be male; have had additional learning support needs at school; have experienced HSB from others; and have experienced more maltreatment as a child.
- The HSB sample reported watching pornography more often than the non-HSB sample. They also reported that pornography was more important to them, and that it represented their ideal type of sex.
- HSB was not directly associated with general viewing of pornography. However, HSB was associated with having viewed aggressive pornography.
- Several factors mediated the relationship. Sexual attitudes and sexual objectification partially mediated the relationship between pornography use and HSB (even though there was not a direct relationship between the two).
- Sexual arousal, pornography addictiveness, and sexual objectification partially mediated the relationship between aggressive pornography and HSB, but emotional response did not.

Clinical Applications

The current findings suggest that in general, pornography exposure is not associated with HSB, unless there is an impact on the YP's sexual attitudes and objectifying behaviours. Aggressive pornography is associated with HSB (including through the mediators explored). These findings offer support for some aspects of the DSMM model regarding vulnerability factors for pornography use and mediators of pornography's impact on HSB. However, we do not know about the potential impact of pornography on younger children/adolescents, and non-aggressive pornography may still be associated with other harmful outcomes for YP.

Findings suggest that education about pornography should include thinking about the potential impact on attitudes and behaviours. YP should be helped to understand that pornography is not representative of typical sexual encounters and that issues of consent are more important than pornography shows.

Professionals and families should be mindful of the type of pornography that YP are watching, and be alert to changes in sexual attitudes and behaviours, including objectification and compulsive/addictive pornography viewing, which may indicate increased risk of HSB.

Limitations

The HSB sample in this study was relatively small so may have failed to show some factors that are significant in the broader population. As we don't know what people's attitudes and behaviour were like before viewing pornography, or whether people started watching pornography before/after committing HSB, we cannot be sure about the nature of the relationships found, e.g. what was the cause of the differences found. The sample recruited young people at the end of adolescence and beginning of adulthood, so it is unclear how much the findings can be generalised to younger adolescents and children.

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Connecting Narrative

Prior to training, my previous work experience was primarily clinical, having undertaken research only in the context of continuing my undergraduate dissertation, and auditing processes within the work place. The research component of training has therefore been a steep and interesting learning curve for me, with challenges along the way.

The topics I chose for my research projects cover several areas of clinical psychology, reflecting my range of interests and eagerness to develop my knowledge across different areas. However, the influence of my previous work experience is clear: coming from an assistant post in forensic learning disability (LD) services, it is unsurprising that one of my projects (as well as my consultancy project) is within LD services, while my main research is within the context of harmful sexual behaviour (HSB). Due to my limited research knowledge at the start of the course, I was keen to develop my skills in a variety of research techniques, encapsulating both quantitative and qualitative approaches. I have been keen to involve people with personal experience (PPE) in the design of my projects (especially given my role on the course's PPE committee), although unfortunately this was limited to asking PPEs to review materials and comment on already developed research designs, due to time pressures. In future, I hope to pursue more collaborative research design, with PPE involvement from the outset.

Service Improvement Project (SIP)

My SIP evaluated the pilot introduction of multimedia person centred plans ('Wikis') in specialist schools in Bristol, focusing on school leavers. This was the first project to get off the ground due to the forced recruitment deadlines associated with the school terms/year, but it also took the longest to complete and 'mutated' several times along the way. My interest in supporting people with LD (PWLD) at times of transition stemmed from previous frustrating experiences of chasing down clinical documents from other services, yet feeling like they never really captured a sense of the person in front of me. I approached Cathy Randle-Phillips to discuss my interest, who put me in touch with psychologists from local child and adult LD teams: Jeni McElwee and Clive Weston. I was surprised to discover that Jeni and Clive did not already know each other, which provided an insight into the amount of work still to be done in joining up services across transition points.

It was a case of perfect timing, as Jeni had recently been told about the Wikis pilot that was coming to Bristol, and this seemed like the perfect avenue to pursue. All three

supervisors were helpful and readily available in designing the project, and Clive also directed me to the Bristol LD Health Trainers, who acted as PPE consultants in reviewing the project materials, providing invaluable feedback and refinements.

The most interesting and also most challenging aspect of the SIP was the number of stakeholder groups involved. Even amongst the three early adopter schools who were part of the Wikis steering group, progress was slow and differed between schools. As the end of the academic spring term approached and some schools still hadn't introduced Wikis, it became clear that, despite my chasing, I was going to struggle to recruit enough PWLD to participate. This meant I had to modify the project to also gain staff views, necessitating a new ethics proposal (as the university ethics committee felt that this differed too much from my original application), as well as going through a local NHS R&D department to recruit staff from the adult LD team. This was an unexpected hurdle, given the ease with which initial university ethics and school approval had been granted (albeit with a few repeated email requests). Even after approval was granted there was a considerable amount of chasing required to recruit staff members to focus groups, and in the end only one staff member turned up for the school focus group. For a short time I attempted to reschedule this focus group, but the additional admin associated with repeatedly contacting people took significant time away from other projects, and eventually I had to recognise that I simply couldn't give any more time to the project. Having had to consult more stakeholder groups than originally intended also meant the task of thematic analysis was much larger and took considerably more time than anticipated, although the process was valuable for refining my qualitative analysis skills.

While all obstacles were eventually overcome, the project ended up looking somewhat different to what I had anticipated, which is in some ways reminiscent of the challenges faced and adaptability required when working in the LD field. However, it doesn't make for 'neat' research, and it saddens me to think that if even I, someone who is very enthusiastic about the field and ensuring the views of PWLD are heard, became frustrated and disheartened at multiple points in the process; it is little surprise than many researchers do not venture into LD, which is a shame. While the recommendations of the project are largely service specific, I believe there are general themes and principles that apply across the multitude of services working with PWLD around transitions, particularly regarding taking a person-centred approach and empowering PWLD, and ensuring tools designed to support individuals do not become another burden.

Main Research Project (MRP)

The idea for my MRP developed from several conversations with my supervisor, Catherine Hamilton-Giachritsis, which stemmed from my previous experiences of working with individuals with sexual offending histories. I was initially enthusiastic about exploring online vs. contact sexual abuse, but Catherine advised that this was too similar to her on-going research. In reading around the area, the subject of online pornography came up several times, and as a highly relevant subject in the age of modern technology I quickly became interested. My initial project proposal entailed looking at predictors of a multitude of harmful outcomes of exposure to pornography, but once I tried to operationalise this to a set of measures it quickly became clear that I had taken on too large a task. Between the reading I had done and teaching received from a member of the Bristol Be Safe service, HSB became an obvious outcome to focus on. The decision regarding which features of pornography use and potential mediators to explore was refined over time, particularly once Elly Hanson joined the project as my external supervisor, bringing fresh eyes and extensive clinical experience to the final stages of project design.

The process of gaining ethical approval was somewhat complex, and given the sensitive nature of the research topics my supervisors and I spent considerable time refining the research design and implementing numerous safeguards to reduce the likelihood of client distress, uninformed disclosures, potential (parental) complaints, and identification of responses. I sought provisional approval from the university ethics committee in parallel with seeking PPE input from a research group at a local school, as school timelines meant that PPE consultation could not happen sooner. At the PPE consultation session, a qualitative researcher from another university with an interest in the subject area (linked to the PPE group) attended at short notice; and while the PPE's feedback was constructive and largely positive, the researcher was more critical and questioned most measures and elements of the design. This shook my confidence in the project considerably, and I was grateful for supervision from Catherine, who helped me to recognise the different perspective the researcher was coming from. Some of her criticisms were linked to the quantitative approach (which she seemed less familiar with), while others appeared to reflect her personal interest in addressing different research questions to those that I was addressing.

Meanwhile, I had been liaising with multiple professionals and HSB services across the country, including NSPCC, Barnardo's, NHS and independent service providers. I spent considerable time completing multiple similar but slightly different ethics applications. The NSPCC application was frustratingly rejected without any discussion, even though the

committee's concerns could easily have been addressed. A full IRAS application was completed and endorsed by the university but eventually not submitted, as one NHS service I'd been liaising with (and had consulted on project design) declined to participate due to service changes and staff shortages, while the other felt they would have few if any service users that met the inclusion criteria. Thankfully, Barnardo's approval was granted after amendments and independent services had less challenging (although between them, numerous) processes, although unfortunately few were concluded in time to collect data. However, I will be continuing to collect data from HSB services throughout the summer, which will hopefully even out the HSB and non-HSB group sizes and strengthen our findings. While the time spent on unsuccessful/unused ethics applications was frustrating, it has been valuable experience for future research applications and helped to refine the details of my research protocol.

The next frustration was the hours spent calling schools and colleges to discuss recruitment, with very few responding and only one offering involvement, by which time we had (we thought!) sufficiently recruited and so declined to pursue this further. Which leads me to the biggest frustration of all: the discovery that my coveted high number of research participants was the result of fraudulent participation for financial gain, rather than genuine responses. The sinking feeling I experienced as I realised that a) we had far more participants than budgeted for; b) after the multiple discussions I'd had with Catherine and the research team about paying participants, we had ultimately made a decision that seemed to be the 'wrong' one; and c) most of my data set might be invalid, was indescribable. Much panic ensued; followed by frustration as every idea I had to screen out invalid responses was thwarted by the measures we had implemented to ensure anonymity of responses. Add to that protracted emails with the university's legal team, IT services and regular fraudulent emails seeking payment for invalid responses, and it made for a very stressful period. Thankfully we were eventually able to use several means to screen out invalid responses. While we are sadly sure to have lost some valid data, I feel confident that the resulting dataset is valid and has been rigorously inspected. However, the resultant need to reopen recruitment for as long as possible meant that the final stages of the project have been very tightly squeezed, and turnaround of data and analysis has had to be quick. Fortunately, we have some interesting findings to show for all the hard work, which are highly relevant in the current climate where online risks and especially HSB are receiving significant attention. I'm sure this will serve as a significant motivator to continue data collection over the summer before re-analysing for publication, which I am keen to pursue given the clinical relevance of this work. I will endeavour to do so in a timely manner, as revisiting the literature in the

context of writing the final project report has demonstrated just how quickly the field is moving, with many new studies emerging that were not published at the time of my proposal.

I have come away from the project with many learning points: think carefully about payment of participants; beware both the benefits and pitfalls of anonymous, online recruitment; do not underestimate the length and complexity of ethical approval processes; and when designing questionnaires and measures, be driven by the intended analytic strategy alongside the existing evidence base.

Critical Review of the Literature (CRL)

Like my initial MRP proposal, my CRL proposal represented grand ambitions that were too broad in scope and needed significant refinement and operationalisation before becoming a workable project. The initial idea for the literature review stemmed from my supervisor, James Gregory's, presentation at our 1st year research fair. Amongst his other, well-established, areas of research interest he commented on his curiosity regarding the role of self-efficacy in psychological treatment. It dawned on me that self-efficacy was a term I had often heard and seen bandied about, but I actually knew little about it and had not come across it in teaching or on placement. This, it transpired, reflected James' own curiosity about the subject. We mused how theoretically and at face value self-efficacy would seem to be an important aspect of treatment, yet it seemed to be absent, or unspoken at least.

The proposed plan for review went through several iterations and methodologies before we settled on a well-defined, systematic approach; and exploring the possibilities often led me 'down a rabbit hole' of related research that I had to pull myself back out of in order to progress with the review. I eventually settled on a systematic review of self-efficacy as a mediator in CBT for depression. The systematic approach and PRISMA guidance suited my desire for structure and clear inclusion criteria (particularly given the large volume of search results that were yielded by initial scoping exercises); suited the question we wished to answer; and provided an opportunity for me to explore a new research methodology that I hadn't used before. The process of generating and operationalising search terms and inclusion/exclusion criteria took some time, and it was a useful exercise to work with James to think about how I could get the ideas I had in my head about the sorts of literature I wanted, down onto paper as clear definitions. As we negotiated the areas of the literature to be excluded from the current review, this essentially generated a list of potential other reviews to be undertaken. While I don't plan to complete these myself, I would be keen to consult or supervise others who might be interested in exploring the area of self-efficacy.

Unfortunately, the progress of my CRL was very stepwise. I would make considerable progress and then my efforts had to be diverted to one of my other two projects due to their reliance on service and organisational timescales, and the review would sit stagnant for a period of time. As I result I ran out of time to do some things that I would have liked to, to strengthen the review, e.g. more second rating of data and quality analysis using a standardised tool (both of which I hope to do prior to publication). When I was able to give significant chunks of time to screening, data extraction and analysis, I found it surprisingly enjoyable. However, I found the outcome slightly less satisfying. Having set out to answer a clinically relevant question, I found that while I could make suggestions about clinical implications, the biggest outcome was that the state of the literature was not sufficient to allow firm conclusions to be drawn. While this is in itself important, it wasn't quite the outcome I had set out to achieve. However, this represents important learning about research itself and perhaps demonstrates how I have been affected by exposure to publication bias; becoming frustrated or disheartened with a lack of significant finding, which is actually an important finding in itself.

In the process of reading around mediation for the review, I also enhanced my understanding of the investigation of psychological processes as mechanisms, which, coupled with my MRP, has stimulated my interest around this area for future research.

Case Studies

Writing case studies on each placement has at times felt like a frustrating and 'risky' business – will the client consent? Will I pass a CTS-R on this session? Do I have enough measures for a SCED? Am I following the literature? What's the heuristic value that justifies writing about this case? However, I've come to realise that these questions are helpful to hold in mind not only when trying to meet the requirements of a DClinPsy course, but in general clinical work. While the course requirements have felt like an additional burden, they have encouraged me to be more thoughtful about my clinical work; to consult the evidence base; to define goals and use suitable outcome measures; to maintain fidelity to the model, and think carefully about justifying adaptations; and to truly respect the uniqueness of each client. I have valued the opportunity for reflection that has come with writing each case study. Looking back over the case studies I have written highlights how many nuances and novelties there are in clinical work that the evidence base doesn't yet tell us about, and how disseminating case reports can be the first building blocks to answering bigger questions. I am pleased to say that the case study from my LD placement is currently

under review for publication; while I will be presenting my older adult case study as a poster at this year's BABCP conference. I am particularly grateful to one of my elective health placement supervisors, Dr Sam Phillips, for imparting her enthusiasm for disseminating clinical work on me. It is thanks to Sam that I recently had the pleasure of delivering a case presentation at the European Cystic Fibrosis Society conference in Seville; sharing a case that I had worked with but not written up as a case study.

Overall Reflections

While I started training focused on the clinical elements of my role, over the past three years I have gained a much greater understanding of the value of bringing clinical skills to bear on research. I have gained greater respect for, and even a sense of satisfaction and enjoyment from, the research process, although the challenges have been frustrating and at times felt overwhelming. I have learnt about my own tendencies to 'go too big' and push the boundaries of time available, and hope to hold onto what I've learnt about scaling back and operationalising endeavours; and switching between juggling multiple projects, and prioritising and focusing on particular tasks as needed.

Having found my 'research hat' I am keen to put it to good use to develop the services, interventions, and general clinical understanding in the areas in which I work. While time is tight in the NHS, I hope to find ways to creatively integrate research into my work, recognising and exploring the gaps that arise in clinical practice. I've realised what a shame it is that practice-based evidence isn't more widely disseminated, and hope this will spur me on to continue to share and publish my own work, starting with publication of the three projects in this portfolio.

Appendix A (CRL): Author guidelines for Clinical Psychology Review

CLINICAL PSYCHOLOGY REVIEW

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

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DESCRIPTION

Clinical Psychology Review publishes substantive reviews of topics germane to **clinical psychology**. Papers cover diverse issues including: psychopathology, psychotherapy, behavior therapy, cognition and cognitive therapies, behavioral medicine, community mental health, assessment, and child development. Papers should be cutting edge and advance the science and/or practice of clinical psychology.

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Self-efficacy	Depress*	CBT
Self*efficacy	Low mood	Cognitive behav*
Selfefficacy	Mood disorder	Cognitive AND therap* OR treatment OR intervention
		Behav* AND therap* OR treatment OR intervention

Date restriction: From (no restriction) to 24.03.17 (date of database searches)
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'"self*efficacy" in Title, Abstract, Keywords and depress* OR "low mood" OR "Mood disorder" in Title, Abstract, Keywords and CBT OR "cognitive behav*" OR "cognitive therap*" OR "cognitive treatment" OR "cognitive intervention" OR "behav* therap*" OR "behav* treatment" OR "behav* intervention" in Title, Abstract, Keywords in Trials'
And
'"self-efficacy" in Title, Abstract, Keywords and depress* OR "low mood" OR "Mood disorder" in Title, Abstract, Keywords and CBT OR "cognitive behav*" OR "cognitive therap*" OR "cognitive treatment" OR "cognitive intervention" OR "behav* therap*" OR "behav* treatment" OR "behav* intervention" in Title, Abstract, Keywords in Cochrane Reviews'

Embase
'self*efficacy':ab,ti OR 'self-efficacy':ab,ti OR 'selfefficacy':ab,ti AND (depress*:ab,ti OR 'low mood':ab,ti OR 'mood disorder':ab,ti) AND (cbt:ab,ti OR 'cognitive behav*':ab,ti OR 'cognitive therap*':ab,ti OR 'cognitive treatment':ab,ti OR 'cognitive intervention':ab,ti OR 'behav* therap*':ab,ti OR 'behav* treatment':ab,ti OR 'behav* intervention':ab,ti)

Scopus
(TITLE-ABS-KEY ("self*efficacy" OR "self-efficacy" OR "Selfefficacy") AND TITLE-ABS-KEY (depress* OR "low mood" OR "Mood disorder") AND TITLE-ABS-KEY (cbt OR "cognitive behav*" OR "cognitive therap*" OR "cognitive treatment" OR "cognitive intervention" OR "behav* therap*" OR "behav* treatment" OR "behav* intervention"))

Pubmed
(((“self*efficacy”[Title/Abstract] OR “self-efficacy”[Title/Abstract] OR “Selfefficacy”[Title/Abstract])) AND (depress*[Title/Abstract] OR "low mood"[Title/Abstract] OR "Mood disorder"[Title/Abstract])) AND (CBT[Title/Abstract]

OR "cognitive behav*"[Title/Abstract] OR "cognitive therap*"[Title/Abstract] OR "cognitive treatment"[Title/Abstract] OR "cognitive intervention"[Title/Abstract] OR "behav* therap*"[Title/Abstract] OR "behav* treatment"[Title/Abstract] OR "behav*

Appendix C (SIP): Author guidelines for Journal of Applied Research in Intellectual Disability

Journal of Applied Research in Intellectual Disabilities

Edited By: Chris Hatton and Peter Langdon; Founded by Professor David Felce

Impact Factor: 1.711
ISI Journal Citation Reports © Ranking: 2015: 13/71 (Rehabilitation (Social Science)); 19/57 (Psychology Educational)
Online ISSN: 1468-3148

Author Guidelines

Crosscheck

The journal to which you are submitting your manuscript employs a plagiarism detection system. By submitting your manuscript to this journal you accept that your manuscript may be screened for plagiarism against previously published works.

1. GENERAL

The *Journal of Applied Research in Intellectual Disabilities* is an international, peer-reviewed journal which draws together findings derived from original applied research in intellectual disabilities. The journal is an important forum for the dissemination of ideas to promote valued lifestyles for people with intellectual disabilities. It reports on research from the UK and overseas by authors from all relevant professional disciplines. It is aimed at an international, multi-disciplinary readership.

The topics it covers include community living, quality of life, challenging behaviour, communication, sexuality, medication, ageing, supported employment, family issues, mental health, physical health, autism, economic issues, social networks, staff stress, staff training, epidemiology and service provision. Theoretical papers are also considered provided the implications for therapeutic action or enhancing quality of life are clear. Both quantitative and qualitative methodologies are welcomed. All original and review articles continue to undergo a rigorous, peer-refereeing process.

Please read the instructions below carefully for details on submission of manuscripts, the journal's requirements and standards as well as information concerning the procedure after a manuscript has been accepted for publication. Authors are encouraged to visit http://authorservices.wiley.com/bauthor/ for further information on the preparation and submission of articles.

All manuscripts must be submitted solely to this journal and not published, in press, or submitted elsewhere.

2. ETHICAL GUIDELINES

Acceptance of papers is based on the understanding that authors have treated research participants with respect and dignity throughout. Please see Section 2.2 below.

2.1 Authorship and Acknowledgements
Authorship: Authors submitting a paper do so on the understanding that the manuscript has been read and approved by all authors and that all authors agree to the submission of the manuscript to the journal. ALL named authors must have made an active contribution to the conception and design and/or analysis and interpretation of the data and/or the drafting of the paper and ALL authors must have critically reviewed its content and have approved the final version submitted for publication. Participation solely in the acquisition of funding or the collection of data does not justify authorship.

It is a requirement that all authors have been accredited as appropriate under submission of the manuscript. Contributors who do not qualify as authors should be mentioned under Acknowledgements.

Acknowledgements: Under Acknowledgements please specify contributors to the article other than the authors accredited. Please also include specifications of the source of funding for the study and any potential conflict of interest if appropriate. Suppliers of materials should be named and their location (town, state/county, country) included.

2.2 Ethical Approvals
Research involving human participants will only be pubished if such research has been conducted in full accordance with ethical principles, including the World Medical Association Declaration of Helsinki (version, 2002 www.wma.net) and the additional requirements, if any, of the country where the research has been carried out. Manuscripts must be accompanied by a statement that the research was undertaken with the understanding and written consent of each participant (or the participant's representative, if they lack capacity), and according to the above mentioned principles. A statement regarding the fact that the study has been independently reviewed and approved by an ethical board should also be included.

All studies using human participants should include an explicit statement in the Material and Methods section identifying the review and ethics committee approval for each study, if applicable. Editors reserve the right to reject papers if there is doubt as to whether appropriate procedures have been used.

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Clinical trials should be reported using the CONSORT guidelines available at www.consort-statement.org. A CONSORT checklist should also be included in the submission material (www.consort-statement.org).

The *Journal of Applied Research in Intellectual Disabilities* encourages authors submitting manuscripts reporting from a clinical trial to register the trials in any of the following free, public trials registries: www.clinicaltrials.org, www.isrctn.org. The clinical trial registration number and name of the trial register will then be published with the paper.

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Conflict of Interest: Authors are required to disclose any possible conflict of interest. These include financial (for example patent ownership, stock ownership, consultancies, speaker's fee). Author's conflict of interest (or information specifying the absence of conflict of interest) will be published under a separate heading. The *Journal of Applied Research in Intellectual Disabilities* requires that sources of institutional, private and corporate financial support for the work within the manuscript must be fully acknowledged, and any potential conflict of interest noted. As of 1st March 2007, this information is a requirement for all manuscripts submitted to the journal and will be published in a highlighted box on the title page of the article. Please include this information under the separate headings of 'Source of Funding' and 'Conflict of Interest' at the end of the manuscript.

If the author does not include a conflict of interest statement in the manuscript, then the following statement will be included by default: 'No conflict of interest has been declared'.

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4.1 Manuscript Files Accepted
Manuscripts should be uploaded as Word (.doc) or Rich Text Format (.rft) files (not write-protected) plus separate figure files. GIF, JPEG, PICT or Bitmap files are acceptable for submission, but only high-resolution TIF or EPS files are suitable for printing.

To allow double-blinded review, please upload your manuscript and title page as **separate** files.

Please upload:
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2. Figure files under the file designation 'figures'.
3. Title page which should include title, authors (including corresponding author contact details), acknowledgements and conflict of interest statement where applicable, should be uploaded under the file designation 'title page'.

All documents uploaded under the file designation 'title page' will not be viewable in the HTML and PDF format you are asked to review at the end of the submission process. The files viewable in the HTML and PDF format are the files available to the reviewer in the review process.
Please note that any manuscripts uploaded as Word 2007 (.docx) will be automatically rejected. Please save any .docx files as .doc before uploading.

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Original Articles, Review Articles, Brief Reports, Book Reviews and ***Letters to the Editor*** are accepted. ***Theoretical Papers*** are also considered provided the implications for therapeutic action or enhancing quality of life are clear. Both quantitative and qualitative methodologies are welcomed. Articles are accepted for publication only at the discretion of the Editor. Articles should not exceed 7000 words. Brief Reports should not normally exceed 2000 words. Submissions for the Letters to the Editor section should be no more than 750 words in length.

6. MANUSCRIPT FORMAT AND STRUCTURE

6.1 Format

Language: The language of publication is English. Authors for whom English is a second language must have their manuscript professionally edited by an English speaking person before submission to make sure the English is of high quality. It is preferred that manuscripts are professionally edited. A list of independent suppliers of editing services can be found at http://authorservices.wiley.com/bauthor/english_language.asp. All services are paid for and arranged by the author, and use of one of these services does not guarantee acceptance or preference for publication.

6.2 Structure

All manuscripts submitted to the *Journal of Applied Research in Intellectual Disabilities* should include:

Cover Page: A cover page should contain only the title, thereby facilitating anonymous reviewing. The authors' details should be supplied on a separate page and the author for correspondence should be identified clearly, along with full contact details, including e-mail address.
Running Title: A short title of not more than fifty characters, including spaces, should be provided.
Keywords: Up to six key words to aid indexing should also be provided.
Main Text: All papers should have a structured abstract (maximum 150 words) as follows: Background, Method, Results, and Conclusions. The abstract should provide an outline of the research questions, the design, essential findings and main conclusions of the study. Authors should make use of headings within the main paper as follows: Introduction, Method, Results and Discussion. Subheadings can be used as appropriate. All authors must clearly state their research questions, aims or hypotheses clearly at the end of the Introduction. Figures and Tables should be submitted as a separate file.
Style: Manuscripts should be formatted with a wide margin and double spaced. Include all parts of the text of the paper in a single file, but do not embed figures. Please note the following points which will help us to process your manuscript successfully:
-Include all figure legends, and tables with their legends if available.
-Do not use the carriage return (enter) at the end of lines within a paragraph.
-Turn the hyphenation option off.
-In the cover email, specify any special characters used to represent non-keyboard characters.
-Take care not to use l (ell) for 1 (one), O (capital o) for 0 (zero) or ß (German esszett) for (beta).
-Use a tab, not spaces, to separate data points in tables.
-If you use a table editor function, ensure that each data point is contained within a unique cell, i.e. do not use carriage returns within cells.
Spelling should conform to *The Concise Oxford Dictionary of Current English* and units of measurements, symbols and abbreviations with those in *Units, Symbols and Abbreviations* (1977) published and supplied by the Royal Society of Medicine, 1 Wimpole Street, London W1M 8AE. This specifies the use of S.I. units.

6.3 References

APA - American Psychological Association
References should be prepared according to the Publication Manual of the American Psychological Association (6th edition). This means in text citations should follow the author-date method whereby the author's last name and the year

of publication for the source should appear in the text, for example, (Jones, 1998). The complete reference list should appear alphabetically by name at the end of the paper.
A sample of the most common entries in reference lists appears below. Please note that a DOI should be provided for all references where available. For more information about APA referencing style, please refer to the APA FAQ. Please note that for journal articles, issue numbers are not included unless each issue in the volume begins with page one.
Journal article
Beers, S. R. , & De Bellis, M. D. (2002). Neuropsychological function in children with maltreatment-related posttraumatic stress disorder. The American Journal of Psychiatry, 159, 483–486. doi:10.1176/appi.ajp.159.3.483
Book Edition
Bradley-Johnson, S. (1994). Psychoeducational assessment of students who are visually impaired or blind: Infancy through high school (2nd ed.). Austin, TX: Pro-ed.

6.4 Tables, Figures and Figure Legends
Tables should include only essential data. Each table must be typewritten on a separate sheet and should be numbered consecutively with Arabic numerals, e.g. Table 1, and given a short caption.

Figures should be referred to in the text as Figures using Arabic numbers, e.g. Fig.1, Fig.2 etc, in order of appearance. Figures should be clearly labelled with the name of the first author, and the appropriate number. Each figure should have a separate legend; these should be grouped on a separate page at the end of the manuscript. All symbols and abbreviations should be clearly explained. In the full-text online edition of the journal, figure legends may be truncated in abbreviated links to the full screen version. Therefore, the first 100 characters of any legend should inform the reader of key aspects of the figure.

Preparation of Electronic Figures for Publication Although low quality images are adequate for review purposes, print publication requires high quality images to prevent the final product being blurred or fuzzy. Submit EPS (line art) or TIFF (halftone/photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Do not use pixel-oriented programmes. Scans (TIFF only) should have a resolution of at least 300 dpi (halftone) or 600 to 1200 dpi (line drawings) in relation to the reproduction size. Please submit the data for figures in black and white or submit a Colour Work Agreement Form. EPS files should be saved with fonts embedded (and with a TIFF preview if possible).
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Check your electronic artwork before submitting it:
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Appendix D (SIP): Confirmation of ethical approval from University of Bath

a) Ethical approval to recruit PWLD/families

psychology-ethics
Inbox - Exchange 11 March 2016 at 13:27
RE: EThics 16-027
To: Hannah Shilling

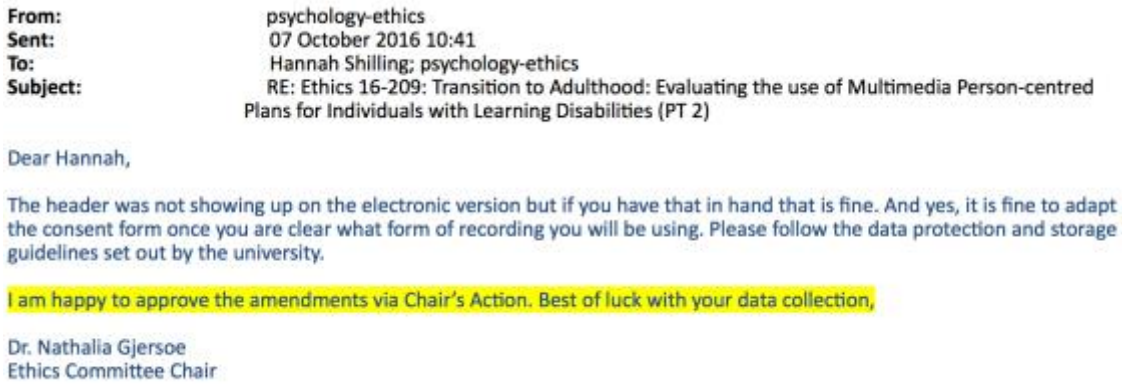
Dear Hannah Shilling

Reference Number 16-027

Thank you for satisfactorily attending to those amendments. I can now confirm that you have full ethical approval for your study.

Best wishes with your research,
Dr Michael J Proulx
Chair, Psychology Research Ethics Committee

b) Ethical approval to recruit school/CLDT staff



From: psychology-ethics
Sent: 07 October 2016 10:41
To: Hannah Shilling; psychology-ethics
Subject: RE: Ethics 16-209: Transition to Adulthood: Evaluating the use of Multimedia Person-centred Plans for Individuals with Learning Disabilities (PT 2)

Dear Hannah,

The header was not showing up on the electronic version but if you have that in hand that is fine. And yes, it is fine to adapt the consent form once you are clear what form of recording you will be using. Please follow the data protection and storage guidelines set out by the university.

I am happy to approve the amendments via Chair's Action. Best of luck with your data collection,

Dr. Nathalia Gjersoe
Ethics Committee Chair

Appendix E (SIP): Confirmation of ethical approval from CLDT service provider

Registered Headquarters
Bristol Community Health
6th Floor
South Plaza
Marlborough Street
Bristol BS1 3NX

www.briscomhealth.org.uk

Hannah Shilling
Clinical Psychologist in Training
University of Bath

4th January 2017

Dear Hannah

Re: CLDT Wikis Research Project

Following discussions in the Clinical Cabinet on 19/12/2016, I am writing to confirm that Bristol Community Health is willing to participate in the proposed study, entitled: CLDT Wikis Research Project.

Please contact Clive Weston, Psychologies Lead, Community Learning Difficulties Team, who will act as your key link at Bristol Community Health, for the duration of the project. Please also liaise with him directly with regard to how / when you intend to proceed.

Clive's contact details are as follows:

Clive Weston, Psychology Lead
Community Learning Difficulties Team
Withywood
Bristol BS13 8QA
Tel: 0117 987 8383
Email: clive.weston@nhs.net

Please could you include BCH on the distribution list, when you come to circulate your research findings, by emailing Fiona Clark, Clinical Audit, Effectiveness and Research Manager, at Fiona.clark@briscomhealth.nhs.uk

Bristol Community Health is looking forward to working with you on this study and on behalf of the Clinical Cabinet, I would like to take this opportunity to wish you good luck.

Yours sincerely

Aileen Fraser
Clinical Director

Appendix F (SIP): Confirmation of agreement to involvement from local authority

RE: Wikis research - written consent required urgently

REPLY REPLY ALL FORWARD ...

Barry Scrase <barry.scrase@bristol.gov.uk>
Fri 3/4/2016 4:47 PM
Inbox

Mark as unread

To: Hannah Shilling;
Cc: Carol Watson <Carol.Watson@bristol.gov.uk>; 'Jennifer McElwee' <Jennifer.McElwee@nbt.nhs.uk>;

This message was sent with high importance.

MessageHeaderAnalyzer + Get more apps

Hi Hannah

Further to our various discussions, I am pleased to confirm Bristol City Council's support and agreement to your research proposal/project.

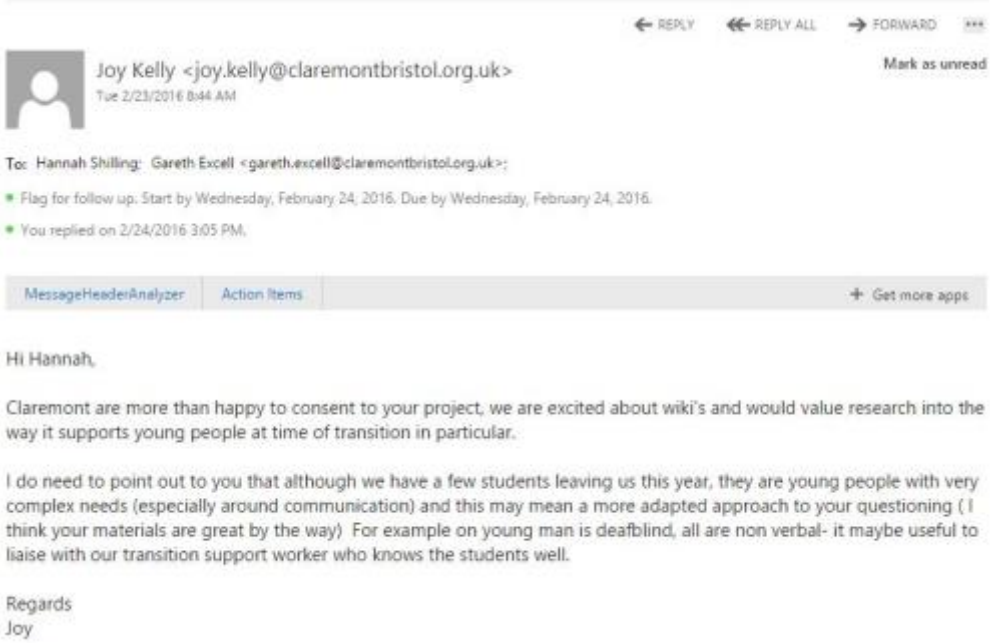
Please may I wish you every success with your project. I look forward to reading your findings.

Many thanks

Barry

Appendix G (SIP): Confirmation of agreement to involvement from relevant schools

a) Agreement from Claremont School



REPLY REPLY ALL FORWARD

Joy Kelly <joy.kelly@claremontbristol.org.uk>
Tue 2/23/2016 8:44 AM

Mark as unread

To: Hannah Shilling; Gareth Excell <gareth.excell@claremontbristol.org.uk>;

Flag for follow up. Start by Wednesday, February 24, 2016. Due by Wednesday, February 24, 2016.

You replied on 2/24/2016 3:05 PM.

MessageHeaderAnalyzer | Action Items | + Get more apps

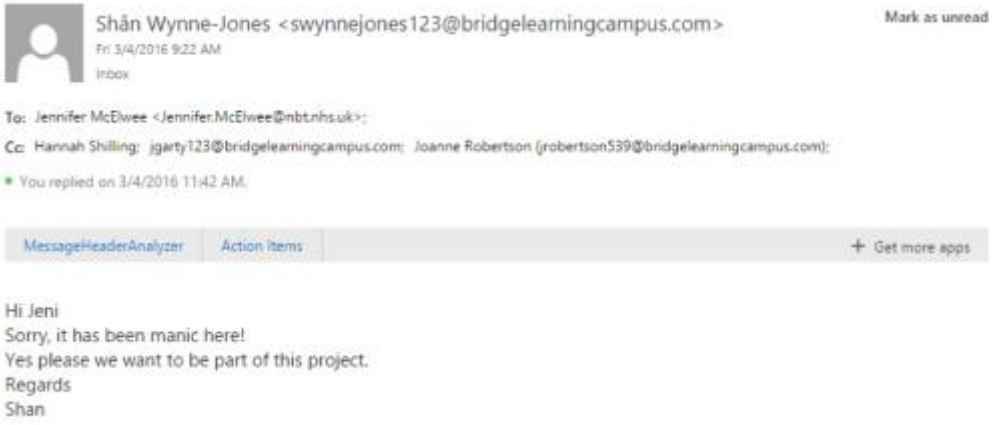
Hi Hannah,

Claremont are more than happy to consent to your project, we are excited about wiki's and would value research into the way it supports young people at time of transition in particular.

I do need to point out to you that although we have a few students leaving us this year, they are young people with very complex needs (especially around communication) and this may mean a more adapted approach to your questioning (I think your materials are great by the way) For example on young man is deafblind, all are non verbal- it maybe useful to liaise with our transition support worker who knows the students well.

Regards
Joy

b) Agreement from New Fosseway School



Shân Wynne-Jones <swynnejones123@bridgelearningcampus.com>
Fri 3/4/2016 9:22 AM
Inbox

Mark as unread

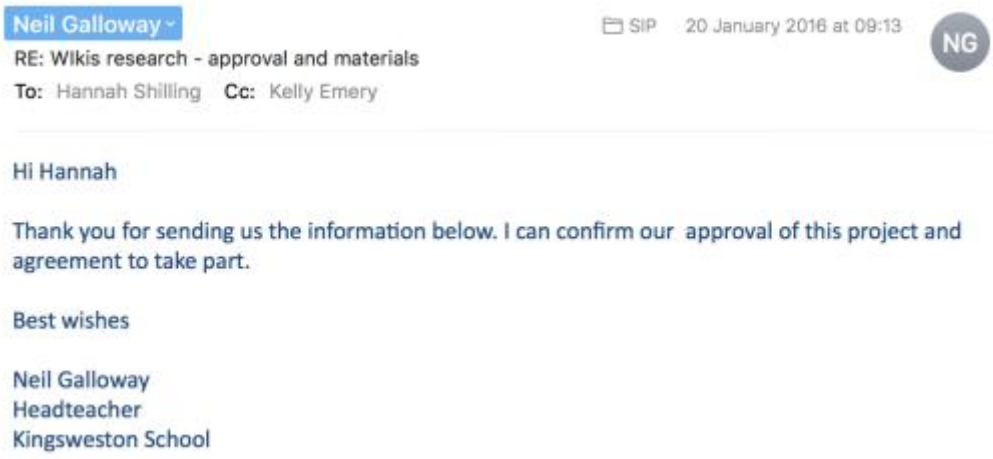
To: Jennifer McElwee <Jennifer.McElwee@nbt.nhs.uk>;
Cc: Hannah Shilling; jgarty123@bridgelearningcampus.com; Joanne Robertson (jrobertson539@bridgelearningcampus.com);

You replied on 3/4/2016 11:42 AM.

MessageHeaderAnalyzer | Action Items | + Get more apps

Hi Jeni
Sorry, it has been manic here!
Yes please we want to be part of this project.
Regards
Shan

c) Agreement from Kingsweston School



Neil Galloway

SIP 20 January 2016 at 09:13

NG

RE: Wikis research - approval and materials
To: Hannah Shilling Cc: Kelly Emery

Hi Hannah

Thank you for sending us the information below. I can confirm our approval of this project and agreement to take part.

Best wishes

Neil Galloway
Headteacher
Kingsweston School

Appendix H (SIP): Brief written questionnaire

Parent/carer name:..... Date:.....

Child name:.....

When new people (e.g. teachers, health professionals) start working with your child, what is the main way they find out information about your child?

☐ My child tells them

☐ Myself/another parent or carer tells them

☐ Other professionals tell them

Are there any tools/items you or your child uses to help tell people about your child? (*please tick any that are used ✓ and circle whether yourself or your child or both this item)*

☐ Communication passport [used by: **parent/carer** or **child**?]

☐ Care plans (Education & Health Care Plan) [used by: **parent/carer** or **child**?]

☐ Wiki [used by: **parent/carer** or **child**?]

☐ Videos [used by: **parent/carer** or **child**?]

☐ Something else [used by: **parent/carer** or **child**?]

(please write what: .....)

How easy is do you think it is for your child it to tell people about themself? *(pick a number)*

Very hard Very easy

1 2 3 4 5 6 7 8 9 10

Parent/carer name:..... Date:.....

Child name:.....

How easy do you find it to communicate with people about your child? *(pick a number)*

Very hard Very easy

1 2 3 4 5 6 7 8 9 10

Additional questions administered at times (ii) and (iii) following introduction of Wikis:

Does your child/do you use their Wiki to help people get to know about your child? (*pick one answer*)

☐ Yes, all the time

☐ Yes, sometimes

☐ No, never

How easy do you find it to use your child's Wiki? *(pick a number)*

Very hard Very easy

1 2 3 4 5 6 7 8 9 10

Does your child/do you use their Wiki to help people get to know about your child? (*pick one answer*)

☐ Yes, all the time

☐ Yes, sometimes

☐ No, never

How easy do you find it to use your child's Wiki? *(pick a number)*

Very hard Very easy

1 2 3 4 5 6 7 8 9 10

Appendix I (SIP): Data collected using brief written questionnaire

Question	Response Options	Pu1		Pa1		Pa2		Pu3		Pa3		Pa4	
		Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Main way people find out about	Child	x	x	x				x	x	x			
	Parent/carer	x	x	x	x	x	x		x			(x)	x
	Professionals	x	x		x	(x)		x			x	x	x
Tools use	Comm pport	x		x				x		x			
	Care plans	x		x	x	x	x	x	x		x	x	x
	Wiki												
	Videos					x							
	Other	Paper - write						Facebook	Facebook				
How easy for child to tell others about self (1-10 rating)		10	10	6	3	1	1	10	10	8	5	1	1
How easy for parents to tell others (1-10 rating)				7	6	9	10			8	5	10	10
Ever use wiki to help people get	All the time												
	Sometimes												
	Never		x		x		x		x		x		x
How easy to use wiki (1-10)							5						
Who shown wiki to	Family												
	Friends												
	Doctors/nurses												
	Therapists												
	Support workers												
	Day centre												
	Clubs												
	Others												

Appendix J (SIP): Interview schedule for PWLD/parents

Interview schedule

Response options/prompts will be used as needed throughout
Additional follow-up questions will be asked where appropriate to clarify responses

ABOUT YOU

Where do you live now?

- Who do you live with?
- Do you have support staff at home? Who do you have for support?

Do you go to any college/day centre/clubs?

Do you see any specialist services – like a nurse, psychologists, physiotherapist?

ABOUT YOUR WIKI *(show demo wiki to prompt)*

How did your school help you with your wiki?

- What did they tell you about it?
- Who helped you set it up – staff/parents?
- What did you use it for at school? – did you just make it, or did you use it in meetings, etc?

Do you still look at the Wiki you made at school?

- How do you look at your Wiki? – own computer, tablet, smartphone, library..
- How much do you look at it?

Do you show other people the Wiki you made at school?

- Has anyone else asked to see it? Who?
- Who have you showed it to? (*prompt re: people identified above)*
- Did they know what a Wiki was?
- What did they think about your Wiki? Did they think it was good/helpful?
- Did it help them understand/get to know you?

Have you changed or put anything new on your Wiki since you left school?

- Did you need any help?
- Who helped you?

Has your Wiki helped you to make plans about the future/work on your goals?

If haven't used Wiki/use it a lot less – why? (*e.g. forget, too hard, need support, no computer, not helpful, other people don't like it/want to see it..)*

What would help you use your Wiki more?

How easy is it to use your Wiki?*

How good do you think Wikis are?*

What is good about Wikis?

What is not so good about the Wikis? What would you change to make them better?

*Rating scale:

Appendix K (SIP): Interview schedule for school staff

Semi-structured interview schedule for school staff members focus group

With a particular focus on school leavers and an emphasis on the last school year..

1. Please could you tell me about your experience of the Wikis pilot so far?

2. What has each school done in the last year to introduce wikis to pupils, parents and staff?
   - How was this done? e.g. parents evenings, timetabled wikis sessions, ad hoc sessions, individual, groups, staff training
   - When was this done (timing in school year, frequency)?
   - Who has held responsibility for the wikis – pupil, parent, school?
   - How have wikis actively been used?e.g. have they been used as a tool at transitions meetings, parents evening, etc., or so far have they just been set up?

3. Have you done anything in particular in your school with wikis, with transition onwards from school/to adult services in mind?
   - Shared wiki with future services?
   - Given any training/info about wikis to future services?
   - Used wikis in transition planning e.g. meetings, including particular info/section about goals, other services?

4. What do you think has worked well?

5. What have the challenges been? (e.g. pupil/parent uptake, support to implement, training)

6. From your perspective, how have wikis been received by pupils and parents?
   - What was the uptake?
   - Any feedback from parents and pupils?

7. Is there anything your school is doing differently with wikis this year?
   - If so, why?

8. Do you think there is anything else that could better support the use/introduction of wikis – either by school, local authority, or others?

9. What are your views about the on-going use of wikis as tool for young people once they have left school?
   - What do you think the usefulness/benefits of wikis has been or might be?
   - Do you foresee any challenges to their on-going use after school?
   - Are there any families you think this will be most/least helpful for or accessed by?

10. Any other comments?

Appendix L (SIP): Interview schedule for CLDT staff

Semi-structured interview schedule for CLDT staff members focus group

1. Can you tell me about what it's like when people come into the service – how much information do you usually have, and how do you find about their history?
   – What about young people in particular, who might have been in child services or attended a special school?

Spend 5 minutes showing a demonstration Wiki and explaining their use/capabilities based on available material from Rix wikis website, mention cost

Thinking specifically about if an individual were to be referred to your service, and had a wiki which they set up at school..

2. What are your initial thoughts about Wikis?

3. If someone was referred to the CLDT and had a wiki from school, how do you think this could be integrated/used in your work with them?

   - Use for information only?
   - Update and add to?

4. What do you think would need to be in place for your team to be able to work effectively with wikis? (e.g. training, wikis champion, IT technology, who holds them, timescales).
   - How would wikis work with existing systems (e.g. Enis, care plans?) or what might need to be considered?

5. What do you think some of the benefits might be of someone you work with having a wiki from school, which *they/their family* own?

   - To the person
   - To the CLDT
   - To your work with them
   - Any existing barriers/issues about transition and information sharing from school/child services to adult services that wikis may help to overcome?
   - Any (groups of) service users you think might particularly benefit from having/coming to you with a wiki?

6. What do you think some of the challenges or barriers might be?
   - To the person
   - To the CLDT
   - To your work with them
   - Any (groups of) service users you think might not find wikis particularly useful or accessible?

   e.g. accessing - IT, cost practicalities, time, (IT) literacy, usefulness in clinical work

7. Is there anything in particular that schools/families could do when setting up a wiki, to make it most helpful if the person were to later be referred to adult services?
   - e.g. any specific information might be helpful to include – what do services in particular need to tell the family about adult services/know about the person from school and child services?

8. Any other comments?
   - Do you see any wider benefit/applicability of wikis within your service?

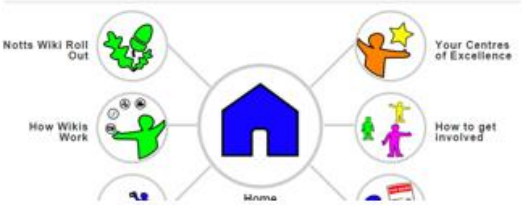
Appendix M (SIP): Information sheet for PWLD

Department of Psychology | UNIVERSITY OF BATH

Hello, my name is Hannah Shilling.

UNIVERSITY OF BATH

I am a student psychologist.



I want to talk to you about your Wiki.

Your school will ask you some questions before your make your Wiki. They will ask again before you leave school.

I would like to meet with you in September or October.

We will sit in a room at your school.

I will ask you questions about how you use your Wiki.

Our meeting should last half an hour.

I will record what you say so I can listen to it later.

I will not look at your Wiki.

1 2

3

I will ask the people in charge of Wikis to tell me how many times people have looked at your Wiki.

I will keep all of this information safe.

I will use what you tell me to write a report.

The report will be confidential. This means I will not use your name in the report.

If you want to ask me any questions about this project, you can email me.

My email address is hs692@bath.ac.uk.

You can say yes or no to taking part.

It is okay if you say yes now and change your mind later.

Please fill in the form to tell me if you want to take part. Please give this back to your school.

Thank you for reading this information.

Hannah

Hs692@bath.ac.uk

Appendix N (SIP): Consent form for PWLD

ABOUT ME

	My name is..
	I was born on..
	I live at..
	My telephone number is..
	I go to school at..

ABOUT THIS PROJECT

This form is about:

Taking part in a project about Wikis. ✓

I have been given information about this project. ☐

I know that this sheet will be given to Hannah Shilling. ☐

I know I will be asked questions about using my Wiki. This might mean meeting with Hannah in September or October. ☐

I know that Hannah will record my answers. ☐

1 2 3 It is okay for Hannah to find out how many times people have looked at my Wiki. ☐

I know that I can change my mind about taking part. ☐

WHAT I THINK..

 I am happy to take part in this project

Signed: .....

Date: .....

OR

 I am not happy to take part in this project

Signed: .....

Date: .....

Appendix O (SIP): Information sheet for parents

Department of Psychology | UNIVERSITY OF BATH

April 2016

Dear Parent/Carer

My name is Hannah Shilling and I am Clinical Psychologist in Training at the University of Bath. I am working with your child's school on a project about Wikis.

As you are aware, this year your son/daughter's school will help them to make a Wiki, where they can upload information, pictures and videos about themselves as an online person-centred plan. This can then be shared with others.

I want to find out how helpful Wikis are for pupils who are leaving school, and whether they help them to share their personal story/information with other people in their life beyond school. I am writing to you to find out if you and your son/daughter would be willing to take part in this project.

What would this involve?

While in the early stages of putting their Wiki together, your son/daughter will be asked a small number of questions by a member of school support staff, to find out how they tell other people about themselves now. You will also receive a similar questionnaire in the post to complete yourself. You and your son/daughter will be asked to answer the same questions again just before they leave school at the end of the school year.

In September/October 2016, I will contact you and your son/daughter to ask the same questions again. I will also ask some people if they would be willing to meet with me for about half an hour to take part in a short interview, about how they have used their Wiki since leaving school. The interview would take place at your child's (former) school.

Where possible I would like to interview former pupils themselves and give their parents/carers a questionnaire to answer similar questions. However, I understand that some individuals might not be able to consent to an interview, in which case I would like to interview their parents/carers instead. All interviews will be audio recorded so I can listen back to them later.

Finally, I would also like to ask the school/local authority, who hold the Wikis, to provide me with information about how many times your

son/daughter's Wiki has been looked at. This will help me get an idea of how much Wikis are being used. **I will <u>not</u> look at your son/daughter's Wiki or any information contained within it.**

All information and recordings will be kept secure in a password-protected computer file that only myself and the project supervisors can access.

<u>What will this information be used for?</u>

The responses to all questionnaires and interviews will be used to write a report for local schools and services regarding how Wikis are being used after people leave school. This will include some recommendations about how to make Wikis more useful in the future. I will also write a report for my university, which may be published in a psychology journal. **All reports will be entirely confidential; they will not include any names or personal details about the people who take part.**

<u>What do I need to do next?</u>

Please fill in the attached form to let me know whether you would be happy for yourself and your son/daughter to be a part of this project. Your son/daughter will also need to complete a consent form, attached to the 'pupil information sheet'. Please return these forms to your child's school in the envelope provided. If you and your son/daughter agree to take part now but change your mind later, you can leave the project at any time.

<u>What if I want to know more?</u>

If you have any questions or queries, please feel free to contact me directly by email at hs692@bath.ac.uk.

Yours sincerely,

Hannah Shilling
Clinical Psychologist in Training, University of Bath

Supervised by:
Cathy Randle-Phillips, University of Bath, c.m.randle-phillips@bath.ac.uk
Jeni McElwee, Specialist Service for Children with Learning Disabilities, Jennifer.mcelwee@nbt.nhs.uk
Clive Weston, Community Learning Disabilities Team, clive.weston@nhs.net

This project has received ethical approval from the University of Bath Psychology Ethics Committee – Reference number -16-027

Appendix P (SIP): Consent form for parents

Parent/carer agreement and consent form

I have received an information sheet about a project looking at the use of Wikis for pupils leaving school. I understand that a confidential report about this project will be written for local services and the University of Bath, and may be published in a psychology journal.

My son/daughter and myself have decided that we

☐ will ☐ will not

take part in this project (*please select as appropriate).*

By taking part, I agree for myself and my son/daughter to complete short questionnaires in Spring 2016, again when my they are leaving school in summer 2016, and again in autumn 2016 once they have left school.

I understand that myself and/or my son/daughter might also be asked to take part in a short follow-up interview in September/October 2016. I understand that this will be audio-taped.

☐ I believe that my son/daughter will be able to consent to an individual interview and am happy for them to be interviewed (*this can include bringing someone along with them to help them communicate).*

☐ I do not believe that my son/daughter will be able to consent to an individual interview. I am willing to be interviewed instead.

(*Please select as appropriate).*

I understand that myself and my son/daughter can pull out of the project at any time by letting the researcher, Hannah Shilling, know.

Son/daughter name: _____

Parent name: _____

Parent signature: _____

Contact telephone number: _____

Home address: _____

_____

Please return this to your son/daughter's school. They will pass this on to Hannah Shilling, lead researcher for the project.

Appendix Q (SIP): Debrief form

Thank you for taking part in this project.

What you have said will help me to write a report. This report will talk about making Wikis more useful for other people leaving school.

This report might be published in a journal. This is like a magazine for psychologists and other professionals. This means that other people can read it and find out more about using Wikis too.

This report will be confidential. This means I will not use your name anywhere.

If you have any questions about what we have spoken about today, you can email me at hs692@bath.ac.uk.

Hannah Shilling
Clinical Psychologist in Training
University of Bath

Supervised by:
Cathy Randle-Phillips, University of Bath, c.m.randle-phillips@bath.ac.uk
Jeni McElwee, Specialist Service for Children with Learning Disabilities, Jennifer.mcelwee@cchp.nhs.uk
Clive Weston, Community Learning Disabilities Team, clive.weston@nhs.net

Appendix R (SIP): Information sheet for school staff

Department of Psychology | UNIVERSITY OF BATH

October 2016

Dear Staff Member

My name is Hannah Shilling and I am Clinical Psychologist in Training at the University of Bath. I am working with your school on a project about Wikis.

As you may already be aware, I want to find out how helpful Wikis are for pupils who are leaving school, and whether they help them to share their personal story/information with other people in their life beyond school. As well as gathering pupil/parent views, I would like to gather staff members' views about the wikis project so far (for the 2015-2016 school year). I would therefore be very grateful if you would be willing to take part in this project.

What would this involve?

In autumn 2016, I will be holding a focus group for staff from the three schools in Bristol who have been actively involved in the wikis pilot in the 2015-2016 school year. This is to find out more about your views and experiences of the wikis pilot to date and your ideas going forward.

The focus group will last approximately one hour and will be held at one of the three participating schools (Claremont, New Fosseway, Kingsweston) following a Wikis Steering Group Meeting. The focus group will be recorded and later transcribed.

All information and recordings will be kept secure in a password-protected computer file that only myself and the project supervisors can access.

What will this information be used for?

The data from this project will be used to write a report for local schools and services regarding how Wikis are being introduced and used after people leave school. This will include some recommendations about how to make Wikis more useful in the future. I will also write a report for my university, which may be published in a psychology journal. **All reports will be entirely confidential; they will not include any names or personal details about the people who take part.**

What do I need to do next?

Please fill in the attached form to let me know if you are willing to take part in this focus group. You can change your mind and choose to leave the focus group at any time, without giving a reason.

What if I want to know more?

If you have any questions or queries, please feel free to contact me directly by email at hs692@bath.ac.uk.

Yours sincerely,

Hannah Shilling
Clinical Psychologist in Training, University of Bath

Supervised by:
Cathy Randle-Phillips, University of Bath, c.m.randle-phillips@bath.ac.uk
Jeni McElwee, Specialist Service for Children with Learning Disabilities, Jennifer.mcelwee@cchp.nhs.uk
Clive Weston, Community Learning Disabilities Team, clive.weston@nhs.net

This project has received ethical approval from the University of Bath Psychology Ethics Committee – Reference number -16-209.

Appendix S (SIP): Consent form for school staff and CLDT staff

Department of Psychology | UNIVERSITY OF BATH

Staff member consent form

Please read and tick to confirm the following:

☐ I have received an information sheet about the project looking at the use of Wikis for pupils leaving school.

☐ I have decided that I am willing to take part in a focus group to contribute to this project.

☐ I understand that this focus group will be recorded and later transcribed, although all data will be reported anonymously.

☐ I understand that I can withdraw from the focus group at any time without giving a reason, by letting the lead researcher, Hannah Shilling, know.

☐ I understand that a confidential report about this project will be written for local services and the University of Bath, and may be published in a psychology journal.

Name: _____

Signature: _____

Date: _____

Place of work: _____

Job role: _____

Contact telephone number: _____

Researcher name: _____

Researcher signature: _____

Please return this form to the lead researcher for this project, Hannah Shilling, Clinical Psychologist in Training, University of Bath. If you have any questions or wish to discuss this project further, you are welcome to contact Hannah at hs692@bath.ac.uk

Supervised by:
Cathy Randle-Phillips, University of Bath, c.m.randle-phillips@bath.ac.uk
Jeni McElwee, Specialist Service for Children with Learning Disabilities, Jennifer.mcelwee@cchp.nhs.uk
Clive Weston, Community Learning Disabilities Team, clive.weston@nhs.net

This project has received ethical approval from the University of Bath Psychology Ethics Committee – Reference number -16-209.

Appendix T (SIP): Information sheet for CLDT staff

Department of Psychology | UNIVERSITY OF BATH

December 2016

Dear Staff Member,

My name is Hannah Shilling and I am Clinical Psychologist in Training at the University of Bath. I am working on a project with local schools for children with learning disabilities. This project is about Wikis, which are online tools where individuals and their families can upload information, pictures and videos about themselves to capture their story. This can then be shared with others. A pilot introduction of Wikis began in three local schools in the 2015-2016 academic year. Some of you may already be aware of this project, as I attended a Transitions Working Group meeting in June 2015 to discuss the initial ideas for this project, along with one of the project supervisors, Clive Weston.

I want to find out how helpful Wikis are for pupils who are leaving school, and whether they help them to share their personal story/information with other people in their life beyond school. As well as gathering the views of those directly involved with the Wikis pilot, I would like to gather the views of professionals who may come into contact with someone with a Wiki if they are later referred to adult services – like the CLDT.

What would this involve?

On 18th January 2017, I will be holding a focus group of CLDT staff from the Transitions Working Group. During this focus group I will show you a demonstration Wiki, and then ask some questions to find out more about your views of Wikis and how the CLDT might work with someone with a Wiki in the future.

The focus group will last approximately one to two hours and will be held following the January CLDT Transitions Group meeting at New Friends Hall.

The focus group will be recorded for later transcription. As there will be several people attending the group we would prefer to video record the group to aid with later transcription. **However, if you have any concerns about this and would prefer the group to be audio recorded instead, please notify me by email prior to the focus group at hs692@bath.ac.uk and this can be arranged.**

All information and recordings will be kept secure in a password-protected computer file that only myself and the project supervisors can access.

Department of Psychology | UNIVERSITY OF BATH

What will this information be used for?

The data from this project will be used to write a report for local schools and services regarding how Wikis are being introduced and used after people leave school. This will include some recommendations about how to make Wikis more useful in the future. I will also write a report for my university, which may be published in a psychology journal. **All reports will be entirely confidential; they will not include any names or personal details about the people who take part.**

What do I need to do next?

Please notify me be email if you are willing to take part in this focus group at hs692@bath.ac.uk. **Please advise if you would prefer the group be audio recorded rather than video recorded.**

You will be asked to sign a written consent form on the day of the focus group to confirm your agreement to participate. You can change your mind and choose to leave the focus group at any time, without giving a reason.

What if I want to know more?

If you have any questions or queries, please feel free to contact me directly by email at hs692@bath.ac.uk.

Yours sincerely,

Hannah Shilling
Clinical Psychologist in Training, University of Bath

Supervised by:
Cathy Randle-Phillips, University of Bath, c.m.randle-phillips@bath.ac.uk
Jeni McElwee, Specialist Service for Children with Learning Disabilities, Jennifer.mcelwee@cchp.nhs.uk
Clive Weston, Community Learning Disabilities Team, clive.weston@nhs.net

This project has received ethical approval from the University of Bath Psychology Ethics Committee – Reference number – 16-209

Appendix U (SIP): Full descriptive account of all subthemes for each stakeholder group

a) PWLD/Parents with a Wiki

While data was collected from two parents, it is noted that most data was provided by one parent who attended a face-to-face interview, while the second parent completed a written questionnaire and subsequently provided a smaller volume of data.

Infancy of Wikis. This theme encapsulated issues pertaining to the Wikis pilot being in its infancy in and individuals' Wikis being in the early stages of development, thus limiting their use so far.

Not embedded. Both parents reported not using their child's Wiki since leaving school or sharing it with anyone else, due to it being only minimally set up. One also reported not being able to use the Wiki for review meetings at school for this reason.

Not widely known. Parents said Wikis were not widely known about, among both other families and wider professionals/services (including adult services), which contributed to them not making use of their Wikis. Both families said that having service providers or healthcare professionals ask about their child's Wiki would prompt them to use it more.

Potential uses. Parents showed consideration of how Wikis might potentially be used once more developed, e.g. in reviews, goal-setting, to help professionals (e.g. medical consultants) gain a broader understanding of their child. Parents felt that Wikis were a good idea, although one was unsure about their usefulness due to lack of use.

Support needs. Parents discussed both support received from their child's former school around implementation of Wikis, and their on-going support needs after leaving school.

School support. Parents reported several ways in which their child's school had supported them in using Wikis, from inviting them to meetings about Wikis (although attendance was low); to providing training sessions on how to use Wikis. One parent reported that the latter included teaching parents how to use Wikis and providing them computer access with support available if needed. They also reported staff actively making

of Wikis within school, e.g. uploading content. In contrast, the other parent reported no additional support beyond a training session.

Post-school support. Parents highlighted the need for on-going support from someone familiar Wikis to support continued use and updating them, but didn't know where/how they could access this. There seemed to be a sense of having lost support now their child was no longer in school.

Potential barriers. Within this theme, parents identified issues that could pose barriers to the implementation and on-going use of Wikis.

Security concerns. One parent believed that online data protection and hacking concerns would deter some parents from using Wikis or putting particularly personal information on them.

Resources. Several forms of resources were referred to, including physical, i.e. having access to a home computer (which families did); and financial, i.e. being willing to self-fund a Wiki if school ceased to fund them (which the family indicated they would not, preferring to spend money elsewhere). One parent highlighted how the health needs of their child impacted on the family's priorities and available time, indicating that Wikis were of low priority and thus the family did not have time to give to them.

Skills. One parent referred several times to having limited computer skills, making Wikis difficult to use, while recognising this may not be a problem for others. They referenced the relative ease of using paper-based tools instead.

b) PWLD/Parents without a Wiki

Three broad themes were identified from data was collected from two PWLD and their mothers: limited familiarity with Wikis, potential uses of Wikis, and their accessibility.

Limited familiarity. This theme encapsulated issues related to key groups of people having limited knowledge, awareness, and experiences of Wikis.

Self. Participants reported receiving only minimal information about Wikis (leaflet), but they knew little about them and had had no exposure to or direct experience of using

them. This meant they were unable to comment on certain aspects of Wikis, e.g. anything un/helpful about them.

Peers. PWLD/parents were unaware of other peers having Wikis, although felt they would be useful for other family members and PWLD.

Professionals/services. Both families reported having not heard Wikis mentioned outside of school, and didn't think other services were aware of them. One PWLD suggested other services (e.g. healthcare) need training about Wikis to support their use in appointments.

Potential uses. Within this theme, PWLD and their families dissed issues related to the potential uses of Wikis, were they have to have one.

Needing support. They highlighted the need for more information about Wikis and practical support to set them up, with PWLD reporting they could use Wikis independently once established. One parent highlighted that the family could only provide limited support due to their minimal computer skills, and suggested parents would also benefit from support sessions e.g. workshops, although noted this would have to work around parents' other commitments. Participants were unsure where they might access external support from.

Enthusiasm/willingness. PWLD/parents indicated said they would use Wikis if they had one and thought they were a (somewhat) good/helpful idea, although it is acknowledged that this is based on the very limited information they had.

Social communication. Multiple quotes indicated the potential use of Wikis to enhance social communication, e.g. helping others to understand the PWLD's strengths and difficulties and get to know them, exploring common interests with peers. They also suggested that wikis could enhance the PWLD's own understanding, for example uploading information in a 'broken down' way for them to look at in their own time.

Security concerns. Participants felt Wikis' online format could pose both a barrier and strength in terms of security of information. While concerns were expressed about the potential for information to be hacked or removed, it was also considered more secure than having paper copies of information that could "get into the wrong hands" (Pa3) and the password-protected access was considered positive.

Timing. Participants highlighted the importance of timing when introducing Wikis. One family felt that Wikis would be most beneficial if introduced early in one's school career rather than later. Another highlighted the importance of timing relative to other events in one's life, i.e. Wikis would be most useful when many external professionals are involved.

Sharing. Within this subtheme, PWLD/parents suggested a broad range of people that they'd share their Wiki with, spontaneously mentioning family and friends, and agreeing (when asked directly) that they'd share with educational, support, and healthcare professionals. One PWLD also recognised the importance of protecting their information by not sharing with strangers.

Comparisons to other tools. One family discussed the use of Wikis compared to existing tools, e.g. care plans. While they did not think Wikis would add any additional information, they felt the Wiki's multimedia format and online security would make it preferable to other tools.

Accessibility. Within this theme, PWLD and families spoke about issues that might affect their ability to access a Wiki.

Skills. PWLD generally reported familiarity and confidence in using computers independently, but indicated that they would initially need support to set their Wiki up and work out how to use it. One parent emphasised that the family lacked computer skills so could provide only limited help.

Cost. When asked if they would be willing to independently fund a Wiki, both declined and said that the cost would be prohibitive; "you can buy something, more, proper" (Pa3).

Physical resources. Both families reported having at least one internet-enabled device at home from which they could access a Wiki.

c) School Staff

Data provided by school staff member during interview was separated into four key themes. The member of staff had been involved with implementing Wikis across the school and was

a member of the Wikis SG, so data provided was not necessarily limited to only those pupils leaving school.

Getting the tool going.

This theme encapsulated issues regarding introducing Wikis as a new tool and getting the pilot off the ground.

Pace and momentum. Data reflected an eagerness to progress with the implementation of Wikis while momentum is strong, indicating frustration when progress has been slower than anticipated ("We all work at different paces and we all want things done yesterday"). However, staff also recognised that at times slowing the pace had been helpful and encouraged thoughtfulness about how the pilot was implemented ("useful.. sort of reigning people like me back who are a bit gung ho.. to 'oh, we need to think about this'''). They recognised that there had been increased momentum/pace around school leavers due to the "threat of the deadline of actually they're going to be leaving us and that support's not going to be there", while introduction with younger pupils had been slower.

Joining services. The staff member said that joining local services together (in the SG) and the SG joining with RixMedia had been an important part of the pilot process, and helped to engage different service provisions. However, they also acknowledged that "it's almost been a case of too many eggs sometimes", subsequently impacting on the abovementioned pace of the pilot, and suggested that perhaps focusing on schools alone may have expedited the process.

Practicalities of the tool. Within this theme, several subthemes were identified which all related to practical aspects of introducing the Wikis as a tool within the school.

Accessibility. Staff noted issues regarding both the accessibility of the tool itself, reporting that school staff and parents had typically found Wikis easy to use, and the tool itself increasing the accessibility of an individual's information; "that information, it's all there, it's not sat in a pile of paperwork in another room in the house somewhere, you know, it's easily, readily available". However, they noted that while the tool being online increased its accessibility across settings, some parents had expressed a preference for paper versions.

Embedding the tool. Staff referred to ways the school were working to embed Wikis "into the normal school life of the children", by devoting individual lesson time to Wikis and linking reviews of the Wikis to the existing school assessment cycle.

Training and support. Staff discussed the Wikis training he had offered to all staff and parents, not just those involved in the Pilot, including open/'drop in' support sessions and training within staff meetings. Training emphasised not just the tool's use but also its ethos, promoting self-advocacy and the benefits of a Wiki. Staff acknowledged the challenges of fitting staff training around teachers' busy schedules: "we did do a twilight session, but obviously teachers are so busy they weren't able to attend it", thus integrating training into their normal work activities instead; "we did do a staff meeting based on Wikis".

Person-centred approach. A key theme was the role of Wikis in encouraging a person-centred approach, encapsulated by the following subthemes:

Holding own story. Staff referred to the value of Wikis in collating multiple pieces of information about a child in one place, which the individual holds and can "share it with whoever they want to". Staff also considered how this might apply to other service user groups, e.g. children in care: "if they move around.. to collate their memories and things like that".

Consistency across services. Staff discussed the role for Wikis in enabling PWLD to receive consistent support across settings, such as when changing classes, leaving school for new services, or when in hospital. Staff highlighted the risk of PWLD not having their needs met if information is not shared across services, giving the example of a pupil who received hospital schooling without the teacher realising he was blind.

Self-advocacy and involvement. Staff described how the interactive nature of Wikis had encouraged individuals' involvement with their own meetings and decision-making: "having something to show and something that's meaningful to them, and not just sitting with other professionals talking about them but not actually involving them". He reported how pupils used their Wikis to "celebrate their successes as well as showing they can overcome their barriers". He said that Wikis had enabled some PWLD to express likes and dislikes that even parents had been unaware of, and "have a massive say in how their information is shared and gathered". However, it was noted that the examples given referred

more to younger pupils, whereas school leavers from the pilot had more severe/complex disabilities (thus were less able to express their own views regarding their information).

Ownership of Wiki. This subtheme encapsulates the issue of school currently holding ownership for most pupils' Wikis (in some cases at the family's request due to funding), but hoping to transfer this to PWLD/families themselves in the future and impart the value of Wikis and driving them forwards.

Longevity. The interviewee discussed several topics which reflected thoughts around the longevity of Wikis as a tool within the school, captured by the subthemes below.

Increasing availability and awareness. Staff shared ideas about increasing availability and awareness of Wikis on several levels: getting Wikis set up for every child within school; offering open training to all parents; setting Wikis up in other services (e.g. children in care); making other services who might encounter a PWLD with a Wiki aware of them (e.g. healthcare); and broadening general public awareness so other parents seek Wikis out. Staff said that other services had not yet approached them about Wikis, but hoped other parents would do so via word of mouth and the involvement of parent-carer organisations. However, also noted was the lack of local resources or information available about Wikis and how to get one.

Funding. Staff discussed how the Wikis pilot is funded by the local authority, but to maintain Wikis long term/into adulthood it will be necessary to explore whether families would self-fund the Wiki or it could be incorporated into the local offer. Staff reported that so far families of school leavers had requested the school continue funding Wikis "so they could test it going into adult services".

Seeing impact. Staff reported informally observing Wikis having an impact on current pupils but had undertaken no formal measures/evaluation, and no way of assessing the impact of Wikis for school leavers aside from chance conversations with parents. Staff reported that impact beyond schooling was a concern for parents too.

Value. Staff spoke enthusiastically about the value of Wikis from his/the school's perspective but noted that the value of Wikis must be appreciated more widely in order to drive them forward: **"**it's all very well us driving it, but actually it's the parents are the end of the day that are the biggest drivers"; as well as other services needing to appreciate their

value as "everyone needs to be on board with it, not just us pushing". Linked to funding, he noted that for families to invest money and families/teachers/services to invest time in Wikis, they need to see their value and utility in practice, beyond school.

Growth. Staff spoke about Wikis growing both in physical size (storage capability) and applications (e.g. being incorporated with educational/vocational skills programmes), to ensure their sustainability and use long-term. Staff reported working closely with Rix to develop Wikis to meet local needs, to prevent them becoming outdated or surpassed by another tool in the future.

d) CLDT Staff

Four overarching themes were identified within this participant group's data:

Key issues surrounding transition. CLDT staff identified existing difficulties around transition between child and adult services.

Encouraging greater autonomy and choice. Staff described how, as PWLD approach adulthood, there is a shift towards encouraging greater ownership of their own care and needs. Some described a need for professionals/services to gain the individual views of the young PWLD rather than only their parents', whilst staff also recognised that often parents themselves have been disempowered and disconnected from their child's care during childhood, due to schools assuming much of the responsibility for meeting healthcare needs.

Change in service approach. Staff described the differences between how child services adult services coordinate their approach to working with PWLD. For example, they talked about how parents' expectations (from child services) might be on-going service involvement, while adult services typically offer only episodes of care. Additionally, staff noted that by no longer having a paediatrician to coordinate healthcare, the 'lynchpin' holding an overview of the individual's care can be lost.

Professional-led handover. Staff talked about the handover between child and adult services typically being led by professionals, although with some family involvement.

Accessing/sharing information between child and adult services. Staff discussed difficulties in accessing information from child services, particularly when adult services are invited to the transitions process late or the PWLD is not referred to adult services until years

later. Staff mentioned several pieces of documentation that are shared but with variability. Some staff reported positive experiences of information sharing, with some professionals from child services being flexible in ending their work to provide consistency of care; or sharing important information with adult services if a future referral is anticipated (although with information governance issues recognised around the latter).

Adapting ways of working. CLDT staff discussed potential adaptations to how they currently work to facilitate the use of Wikis in their work with PWLD.

Linking with other services. Staff recognised currently being unfamiliar with Wikis, and discussed forming better links with child services who could be accessed as a resource for knowledge about Wikis.

Multimedia working. Staff discussed the value of using multiple medias to gain a fuller understanding of clients. Some noted how they already use multimedia in their work, which could easily extend to the using Wikis. However, some practical considerations were raised in the following subtheme.

Practical considerations for services. Staff raised many practical issues that would need to be considered and managed in order to integrate Wikis into work, noting that Wikis might not concern them for some time until they are more widely utilised. Some were concerned about Wikis being time-consuming, while others felt that they would save time getting to know people and their needs. Staff discussed how they might update their existing documentation to prompt them to ask clients about Wikis. Staff talked about needing various levels of support to use Wikis, and suggested that crib sheets might be helpful. The two concerns discussed most were about information governance and being able to access and update people's Wikis; and the technological resources required. Staff do not have the computer resources to access Wikis in meetings with PWLD in the community, and also queried how they could transfer digital information to service users, e.g. scanning, USB sticks. They also queried how to record such information on service record-keeping systems.

Being service user led. Staff noted the importance of adapting their working practices to the needs of individuals, and needing to be responsive if service users wish to bring Wikis into their work with adult services. One staff member raised the concept of making the service fit the PWLD, rather than vice versa.

Person-centred approach.

This theme encapsulated several subthemes related to Wikis encouraging a person-centred approach to working with clients.

Holistic view of the individual. Staff spoke multiple times about Wikis providing a more holistic view of the individual: "It's making them a whole person isn't it, and what's important to them, what makes them tick" (P1); and being used to celebrate their success and progress. Staff suggested circumstances in which this might be particularly beneficial, e.g. moving to a residential setting, working with new support staff, or when unwell in hospital. Staff noted how the Wiki can hold someone's history so this does not have to given repeatedly, and does not get forgotten for those individuals with deteriorating conditions, although staff noted that remembering previous abilities may potentially be distressing for such individuals.

Normalising. Staff referred to the 'normality' of computer and web-based ways of working. They noted how many young PWLD are accustomed to using computers and so working in this way may give PWLD the opportunity to demonstrate their skills being above staff's. Staff referred to young people without a learning disability taking greater ownership as they transition to adulthood, and suggested Wikis may enable young PWLD to do the same.

Promoting ownership, choice and active involvement. Staff discussed the potential for Wikis to empower PWLD and ensure their voices are heard. They considered how this could facilitate involvement in decision-making, meetings and appointments. Staff noted the importance of the Wiki being owned by the individual and empowering them, choosing what information is stored on their Wiki and how they use it. Staff noted how the move to greater ownership and empowerment reflects the transition of all young people to adulthood, and needing to help parents understand that they cannot solely make decisions on the PWLD's behalf anymore.

Distinct from services documentation. Staff noted that Wikis serves a distinct function from paperwork/handover completed by professionals. They said that while it might be helpful for individuals to include some healthcare documents on their Wiki, without staff governance of content then Wikis wouldn't meet service need, and ultimately Wikis are to be used by the individual wishes rather than the service.

Sustainability.

The final theme discussed by CLDT staff was that of sustainability, i.e. ensuring the longevity of both the tool itself and its use.

Availability of on-going support. Staff noted the importance of clients being able to access support for any difficulties with their Wiki, and queried who might provide this.

Resources and funding. Staff identified funding and equipment as key issues that may mean Wikis drop out of use after school. They expressed concern that service users may be unable/unwilling to self-fund a Wiki, and some may lack computer access. However, they recognised that many clients have computers/mobile devices, which may make Wikis more accessible for them to take to appointments.

Getting people on board. Staff felt Wikis may drop out of use after school unless families and other services are signed up to them and support the individual to continue using them, recognising that some families may be more active in this than others. They suggested extending the Wikis pilot to a local day centre service to broaden its implementation.

Safety and security. Within this subtheme, staff expressed concerns about the potential for individuals to share information on their Wiki in a way that may be 'inappropriate', akin to (over)sharing on social media. They emphasised the need for PWLD to be guided about what to share and through which forums. However, the team also noted the choice and ownership of PWLD in sharing their own data as they wish, provided they have the capacity to do so.

Appendix V (MRP): Author guidelines for Sexual Abuse: A Journal of Research and Treatment

Instructions to Authors

Submission Guidelines

SAJRT uses an online submission and review platform. Manuscripts should be submitted electronically to http://mc.manuscriptcentral.com/sajrt. Authors will be required to set up an online account on the SAGE Track system powered by ScholarOne. From their account, a new submission can be initiated. Authors will be asked to provide the required information (author names and contact information, abstract, keywords, etc.), complete submission checklist, and to upload the "title page" and "main document" separately to ensure that the manuscript is ready for blind review. Supplemental materials (e.g., additional tables, figures) can also be uploaded, when applicable, and will need to be prepared for blind review. The site contains links to an online user's guide (Get Help Now [add web link]) for help navigating the site.

Manuscripts are subjected to blind peer review and require the author's name(s) and affiliation listed on a separate page. Any other identifiable information, including any references in the manuscript, the notes, the title, supplemental materials, and reference sections, should be removed from the paper and listed on separate pages.

Manuscripts should be prepared according to the guidelines set forth in the Publication Manual of the American Psychological Association (6th ed., 2010). This includes stipulations regarding page layout, manuscript sections and headings, and formatting of references, tables, and figures. DOI numbers when available for listed references are to be included. Effect sizes and confidence intervals are reported, where appropriate.

Each submission should also include an abstract between 100 and 150 words and 4-5 keywords.

Authors should also ensure appropriate statements [*add hyperlink to 'Statements' here*] have been included in the submission and the Submission Checklist completed.

Submission of a manuscript implies a commitment by the author to publish in the journal. If the manuscript is accepted, the editors assume that any manuscript submitted to *SAJRT* is not currently under consideration by any other journal.

If you are interested in open access, click here. The standard article processing charge for SAGE Choice is 3,000 USD/1,600 GBP. The fee excludes any other potential author fees levied by some journals (such as color charges) as well as taxes where applicable.

Author Statements

SAJRT strives for objectivity and transparency in research. As such, we request authors to disclose information relevant for the Editors, reviewers, and readers of this journal.

Statement 1: Statistical Significance Statement

Authors should provide information on their study design and analysis that can increase the risk of spurious significant findings (colloquially referred to as *p*-hacking):

1. In the Acknowledgement section, empirical manuscripts should include the statement, "*The authors takes responsibility for the integrity of the data, the accuracy of the data analyses, and have made every effort to avoid inflating statistically significant results.*"
2. In the Method section, empirical manuscripts may consider including the statement, "*We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study*", from the 21 Word Solution (Simmons, Nelson, & Simonsohn, 2012). Authors may also include, if appropriate, the following elements in the Method section:

1. Report how sample size was determined and what rule was used to stop data collection;
2. Report the total number of any excluded cases or observations, and the reasons for making these exclusions;
3. Report all dependent variables that were analyzed for the research question(s), whether reaching statistically significant thresholds or not;
4. If applicable, report all relevant manipulations or conditions, whether successful or not;
5. Specify whether analyses were *prespecified* prior to data collection- in order to address the specific research question- or *exploratory*- implemented after examination of the data and/or prespecified analyses (see Head et al. [2015], for further information);
6. Cite prior publication of some or all of the data reported in the manuscript, to assist in future meta-analysis.

These guidelines are intended to be aspirational, to encourage greater transparency and reproducibility. Submissions that cannot address all these points will still be considered and accepted for publication in *SAJRT*.

We recognize that these guidelines are more easily implemented for manuscripts reporting experimental designs, but may not be suitable for other types of studies that are commonly submitted to *SAJRT*. For example, it is common in our field for a study to use data from a large database that have led to multiple publications using some or all of the data. Citing all prior publications (Element f) would be excessive in length, and might not be possible if the authors are not aware of all the published work that has used this database. In this particular example, we suggest that the authors clearly describe the database and cite prominent studies using the database, so that the readers understand where these data come from. Large databases may also have many measures, not all of which would have been analyzed for the purpose of the submitted study. In such cases, reporting all the measures would again be excessively long. Instead, the authors are asked to report all variables that were examined for the research questions (Element a).

Qualitative study designs are another submission that do not easily fit these elements and where the 21 Word Solution might not be appropriate. For qualitative studies, Element a (reporting how sample size was determined), Element b (reporting any included cases), and Element f (citing prior publications that use some or all of the data) are usually applicable.

The 21 Word Solution would also not be applicable to meta-analyses, but much of the elements (i.e., Element B, C, E, and F) are pertinent. Finally, review or theoretical submissions that do not present any statistical analyses would not require these statements.

Statement 2: Role of Funding Sources

Authors must identify any financial support received to conduct the research and/or preparation of the manuscript. Authors should specify if the funding source had any involvement in the research and/or preparation of the manuscript. The absence or presence of funding does not preclude eligibility for publication in the journal.

Statement 3: Disclosure of Financial Interests

All authors must disclose any financial interests, such as a financial stake in a measure or service described in the manuscript, or a close, current personal relationship with someone (e.g., partner/spouse, family member) who has a financial stake in a measure or service that is described. A financial interest does not preclude eligibility for publication in the journal.

Statement 4: Research ethics approval

Authors must include a statement in the Methods section regarding institutional research ethics review and approval, if applicable. If not applicable, a short rationale should be provided (e.g., not applicable or not required).

Appendix W (MRP): Confirmation of ethical approval from University of Bath

From: Nathalia Gjersoe
Sent: 27 February 2017 13:52
To: Hannah Shilling <H.Shilling@bath.ac.uk>
Cc: Catherine Hamilton-Giachritsis <C.Hamilton-Giachritsis@bath.ac.uk>
Subject: Ethics 16-224

Dear Hannah,

Thank you very much for taking the time to confer with the data protection office. I am happy to confirm that you have full ethical approval for this study.

Best of luck with your data collection,
Dr. Nathalia Gjersoe,
Chair, Psychology Ethics Committee

Appendix X (MRP): Confirmation of agreement from HSB service

[redacted]

7th March 2017

Dear Colleagues

Re: Investigating Associations between Exposure to Pornography and Harmful Sexual Behaviour in Adolescents

This is a letter to confirm that [redacted] are in consent of participating in the research project being conducted by Hannah Shilling, under supervision of Dr. Catherine Hamilton-Giachritisis, in conjunction with the University of Bath. We understand this research will form part of her Clinical Psychology training.

This agreement is subject to approval by the University Ethics Committee, and proof of such must be provided. It is also conditional upon Hannah Shilling signing an agreement to adhere to the policies and confidentially statement put forward by [redacted] Agreement to proceed will also require Hannah to have a qualified staff member present at all times during any contact with young people.

Please feel free to contact me should there be any concerns or questions.

Kindest Regards,

[redacted]

Appendix Y (MRP): Fraudulent data concerns and validity checks

An initial online recruitment drive yielded 188 respondents and recruitment was suspended to enable processing of responses and payment. When recruitment was re-opened (without advertisement), 144 new responses were received in a matter of hours. This raised concern among the research team. Examination of these responses and the pattern of completion times was undertaken, in discussion with University of Bath and Bristol Online Survey IT services. This revealed that these responses had almost certainly been automatically generated (most likely for financial gain). All 144 responses were excluded from analysis. The initial 188 responses were therefore re-examined, with multiple data checks being undertaken to ensure the validity of responses, as well as reviewing the pattern of timings with which responses were received. All invalid responses and those in which a regular pattern of responding was established were excluded (136), leaving 52 valid responses. While it is likely that this conservative approach resulted in the exclusion of some valid responses, it was deemed appropriate to take the most rigorous approach to ensure that all invalid data was removed. The researchers were ultimately satisfied with this approach; as 71% of the remaining 52 responses included differing text responses to optional, qualitative items, this was considered strong evidence that the remaining responses had not been computer generated.

Following approval from the ethics committee, online recruitment was re-opened using a different web address and without payment. This yielded 72 responses, of which 3 were excluded as they did not pass validity checks (69; N=124 in total).

Conversations with the department lead and university legal team are on-going regarding non-/payment of the 144 fraudulent responses.

Data validity checks were as follows:

1. Ensure no duplicate unusual passwords chosen by participants
2. Check year of birth and age match
3. Match between HSB questions (i.e. if the person indicated no involvement from HSB services, the only valid response to questionnaire item asking if pornography use has changed as a result of treatment would be ‘N/A – never had treatment’; if provided qualitative feedback about impact of a HSB service on their pornography use they must have said yes to question about having had service involvement)

4. Match between ‘physical fight’ questions (i.e. if someone has selected that they have never had a physical fight, their responses would be invalidated if they then gave a selection of people they’d had a fight with; age of last fight should not have been younger than age of first fight)
5. Check pornography use questions (i.e. age of using pornography most should not be younger than age when first viewed pornography)
6. Match questions regarding online use of pornography (i.e. if said have used an internet search tool to find pornography in CPUI-A-M, must have indicated watching pornography in an online format and that have searched for pornography themselves)
7. Check for any invalidating qualitative responses (examples from exclusions; said referred to ‘Ann Summers’ as a specialist service for sexual behaviour; said in other comments box ‘I lied, I’m not an Arab’
8. Participant provided data for at least 50% of whole questionnaire pack

Pattern of responding check:

The times of questionnaire completion indicated that after a certain point there were 7-10 questionnaire completions per hour, every hour, relatively evenly spaced throughout the hour.

To confirm the right cut-off point had been used for when this pattern began, examined the suspected ‘cut-off’ point in relation to data validity checks. Almost all responses already identified as invalid came after the cut-off and no valid qualitative responses to questionnaire items were received after this point.

Appendix Z (MRP): Online questionnaire pack

About you

9.How did you find out about this study? *Optional*

Through my school/college
Online, through a research website
Online, through social media

10. What gender do you identify yourself as being? *Optional*

Male
Female
Other

*a.*If you selected Other, please specify:

11. What gender do your parents identify you as being?

Male
Female
Other

*a.*If you selected Other, please specify:

12. What is your sexual orientation? *Optional*

Asexual
Bisexual
Heterosexual/Straight
Gay or lesbian
Other

*a.*If you selected Other, please specify:

13. Which option best describes your ethnic group or background? *Optional*

White - British
White - Irish
White - Gypsy or Irish Travller
Any other white background
Mixed/Multiple ethnic groups - White and Black Caribbean
Mixed/Multiple ethnic groups - White and Black African
Mixed/Multiple ethnic groups - White and Asian
Any other Mixed/Multiple ethnic groups
Asian/Asian British - Indian
Asian/Asian British - Pakistani
Asian/Asian British - Bangladeshi
Asian/Asian British - Chinese
Any other Asian background
Black/African/Caribbean - African
Black/African/Caribbean - Caribbean
Any other Black/African/Caribbean background
Arab
Any other ethnic group

14. What is the highest level of education your mother/first parent/first main carer completed?*Optional*

Didn't finish school
Secondary school
University or higher education

15. What is the highest level of education your father/second parent/second main carer completed?*Optional*

Didn't finish school

Secondary school
University or higher education

About you

16. What year were you born in? *Required*

Before 1990
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
After 2005

17. What type of school/college did you or do you go to? *Optional*

Academy
Private
State
Other

18. What level of learning support did you school give you, as an individual?

Mainstream school with usual level of support
Mainstream school with extra support (e.g. Statement of Special Needs or Education and Health Care Plan)
Specialist provision school (e.g. specialist school for people with learning disabilities or extra education needs)

This part of the survey uses a table of questions, view as separate questions instead?

19. How much has your school taught you about the risks associated with using the internet and how to stay safe online? *Optional*

Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	
Nothing at all						A great deal

20. Did this include teaching about online pornography? *Optional*

Yes
No
Don't know

This part of the survey uses a table of questions, view as separate questions instead?

21. How much have your parents/carers taught you about the risks associated with using the internet and how to stay safe online? *Optional*
Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	
Nothing at all						A great deal

22. Did this include teaching about online pornography? *Optional*

Yes
No
Don't know

This part of the survey uses a table of questions, view as separate questions instead?

23. How closely do your parents/carers try to monitor or restrict your use of the internet? *Optional*
Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	
Not at all						A great deal

This part of the survey uses a table of questions, view as separate questions instead?

24. How open and honest are you with your parents/carers about what you do when you go online? *Optional*
Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	
Not at all						Completely

Your life experiences

This part of the survey uses a table of questions, view as separate questions instead?

25. Here is a list of things that a parent or another caregiver may have done towards you. Taking all situations into account throughout your childhood (up until the age of 18), please indicate how your parents/any other caregiver acted towards you.

	Never	Once	Sometimes	Often	Always
1. Repeatedly called you unkind names (e.g. stupid) in a hurtful way.					
2. Threatened you with violence (e.g. threatened to hit you), but didn't actually carry out the threat.					
3. Been physically violent towards you, e.g. hit you with a fist, shaken you hard,					

pinched you, kicked you hard, hit you with something hard (not on the bottom), burnt you, grabbed you around the neck, thrown you, knocked you over, or slapped you on the face.					
4. Couldn't take care of you because they were too drunk or high or were caught up in their own problems.					
5. Left you at home alone or without care for an extended period (e.g. overnight), when you think you were too young to be left alone.					
6. Explained why something was wrong, sent you to your room, gave you something else to do, took away privileges or grounded you.					
7. Were unable to take you for hospital care or provide you with food when you needed it.					
8. When you did not want to, has anyone touched you or made you touch them in a sexually inappropriate way, insisted or forced you to perform oral or penetrative sex with them or forced you to watch sexual acts between them and their partner.					
9. Has a romantic partner ever physically/sexually assaulted you.					
10. Been there to offer you support/help or been available for you to talk to when you have needed it.					

Life experiences

26. Have you ever been involved in a physical fight with someone (not including play-fighting or any time you might have knocked into or hurt someone by accident)? *Optional*

Yes
Yes, but only in self-defence (I was attacked by someone and was protecting myself)
No

27. If yes, who with? *(Please select all that apply)*

Friend
Sibling
Partner
Another family member
Someone from school/college/work
Someone you didn't know
Other

*a.*If you selected Other, please specify:
28. If yes, roughly how old were you when you had your first physical fight?
29. If yes, roughly how old were you when you had your last physical fight?

During a sexual encounter with another person, have you ever:
a) Done something you weren't sure the other person wanted?
b) Done something which the other person said was not okay or said they were unhappy about, either before it happened or at the time?
OR

Have you ever shared a sexual image of someone that you weren't sure they wanted shared?
30.(to any of the above)

Yes
No
Not applicable - never had a sexual encounter

During your previous sexual encounters, has another person ever:
a) Done something that you didn't want them to?
b) Done something that you said was not okay or that you said you were unhappy about, either before it happened or at the time?
OR

Has anyone ever shared a sexual image of you that you didn't want shared?
31.(to any of the above)

Yes
No
Not applicable - never had a sexual encounter

32. Have you ever been referred to any specialist service(s) because of your sexual behaviour?

Yes
No

33. If yes, which service(s) were you referred to? (e.g. police, mental health services, youth offending services, social care) *Do **not** include the place name, such as Bath/Bristol/Oxford.*

Have you ever seen or looked at pornography? When we ask about pornography, we mean images and films of people having sex or behaving sexually. This includes semi-naked and naked images and films of people.

Yes
No

Pornography use

35. Have you ever viewed pornography in any of the following forms - this may include accessing it directly for yourself, or someone else showing it to you? *Please select all that apply. Optional*

DVDs
Magazines
Newspapers
Online - this might be using a smart phone, computer, tablet, etc.
Television

Other

*a.*If you selected Other, please specify:

36. What is the main format in which you have viewed pornography? *Optional*

DVDs
Magazines
Newspapers
Online - this might be using a smart phone, computer, tablet, etc.
Television
Other

*a.*If you selected Other, please specify:

37. How do you find pornography? *(Please select all that apply) Optional*

I look for it myself
Shown/sent it by friends
Shown/sent it by a family member
I find it by accident e.g. it pops up when I'm doing something else online
Other

*a.*If you selected Other, please specify:

38. What are the main reasons why you look at pornography? *(Please select all that apply)Optional*

Curiosity
For sexual excitement
For information about sex
With friends who want to do it
For a laugh
It just pops up on my computer
Other

*a.*If you selected Other, please specify:

How old were you when you first viewed pornography?

Younger than 3
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21

40. At what age(s) were you viewing pornography most frequently?

41. If you have ever received treatment/input from specialist services for your sexual behaviour or use of pornography, at what stage were you using pornography most frequently?

Not applicable - never had any treatment/input

Before treatment/input
During treatment/input
After treatment/input
My pornography use has been the same throughout treatment/input

PLEASE ANSWER THE FOLLOWING QUESTIONS, BASED ON THE TIME IN YOUR LIFE WHEN YOU WERE WATCHING/LOOKING AT PORNOGRAPHY MOST FREQUENTLY.

42. On average, how often do/did you view pornography? *Optional*

More than once a day
Daily
4-6 times a week
2-3 times a week
Weekly
Fortnightly
Monthly
Less than monthly
Never

43. On average, how long do/did you look at pornography for each time you view/viewed it?*Optional*

Less than 5 minutes
5-15 minutes
15-30 minutes
30-60 minutes
Over an hour

This part of the survey uses a table of questions, view as separate questions instead?

44. How important is/was pornography to you? *Optional*
Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	
Not at all						Very

45. Where or how do/did you access pornography online? *(Please select all that apply) Optional*

Using personal device, e.g. phone, tablet, laptop
Using family device e.g. computer or tablet
Using a friend's device
Using a school device e.g. computer
Using a device in a public place, e.g. library, internet cafe
I don't access pornography online
Other

*a.*If you selected Other, please specify:

PLEASE ANSWER THE FOLLOWING QUESTIONS, BASED ON THE TIME IN YOUR LIFE WHEN YOU WERE WATCHING/LOOKING AT PORNOGRAPHY MOST FREQUENTLY.

46. Please briefly describe the MAIN type of pornography you access/accessed, i.e. whether it is still or moving images (pictures/videos), who it involves (ages, gender, number of people), the sexual acts being carried out, any other important details. *Optional*

47. Please briefly describe ANY OTHER TYPES of pornography you access/have accessed, i.e. whether it is still or moving images (pictures/videos), who it involves (ages, gender, number of people), the sexual acts being carried out, any other important details. *Optional*

Have you ever viewed pornography in which someone:

a) Is persuaded to do something sexual which they weren't sure about or didn't want to do?

b) Doesn't enjoy what is happening to start with, but does by the end?

c) Is forced to do something sexual which they didn't want to do?

d) Is physically hurt?

e) Appeared as though they may be under the age of 16?

48.(in response to any of the above) *Optional*

Yes
No

This part of the survey uses a table of questions, view as separate questions instead?

49. How much does the pornography you watch/watched represent your ideal type of sex? i.e. How much does the pornography you watch/watched match up to what you want your sexual encounters to be like? *Optional*

Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	
Not at all (nothing like how I want sex to be)						Completely (shows exactly how I want sex to be)

50. How do/did you feel after viewing pornography? *(Please select all that apply) Optional*

Amused
Angry
Anxious
Aroused
Ashamed
Bored
Calm
Confident
Confused
Content
Disgusted
Embarrassed
Excited
Guilty
Happy
Interested
Proud
Regretful

Satisfied
Shocked
Surprised
Upset
Other

*a.*If you selected Other, please specify:

51. How sexually aroused do/did you feel after viewing pornography? By sexually aroused we mean feeling "turned on" - *e.g. you may feel sensations in your body, particularly your genitals, and a desire to engage in sexual activity*

Not at all
A little
Somewhat
Quite a lot
Very
Don't know

PLEASE ANSWER THE FOLLOWING QUESTIONS, BASED ON THE TIME IN YOUR LIFE WHEN YOU WERE WATCHING/LOOKING AT PORNOGRAPHY MOST FREQUENTLY.

This part of the survey uses a table of questions, view as separate questions instead?

52.

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
At times, I have tried to rearrange my schedule so that I will be able to be alone in my room to view pornography.							
I have gotten up earlier or gone to bed later than my family or roommates to view pornography.							
I have refused to go out with friends or attend certain social functions to							

have the opportunity to view pornography.							
I have put off studying or other important priorities to view pornography.							
I have avoided situations in which my pornography usage could be exposed or confronted.							
I have feared that someone might someday discover my secret of viewing pornography.							
I have tried to hide what I am looking at when I am viewing pornography.							
I have stayed up after midnight to view pornography.							
I have searched for pornography through an internet search tool.							
I have masturbated while							

looking at pornography.							
I have believed I am addicted to pornography.							
I have had no problem controlling my use of pornography.							
I have felt unable to stop my use of pornography.							
Even when I have not wanted to view pornography, I have found myself drawn to it.							
It has been easy for me to turn down the chance to view pornography.							
When I have been unable to access pornography, I have felt anxious, angry, or disappointed.							
I have sometimes used pornography as a reward for accomplishing something.							
Pornography has sometimes							

interfered with certain aspects of my life.							

If you have had treatment/input from specialist services, do you think this has affected/changed your use of pornography? If so, how?

This part of the survey uses a table of questions, view as separate questions instead?

54. Listed below are several statements that reflect different attitudes about sex. For each statement choose the response that indicates how much you agree or disagree with that statement. Some of the items refer to a specific sexual relationship, while others refer to general attitudes and beliefs about sex. Whenever possible, answer the questions with your current partner in mind. If you are not currently dating anyone, answer the questions with your most recent partner in mind. If you have never had a sexual relationship, answer in terms of what you think your responses would most likely be.

	Strongly agree	Moderately agree	Neutral - neither agree nor disagree	Moderately disagree	Strongly disagree
1. I do not need to be committed to a person to have sex with him/her.					
2. Casual sex is acceptable.					
3. I would like to have sex with many partners.					
4. One-night stands are sometimes very enjoyable.					
5. It is okay to have ongoing sexual relationships with more than one person at a time.					
6. Sex as a simple exchange of favours is okay if both people agree to it.					

7. The best sex is with no strings attached.					
8. Life would have fewer problems if people could have sex more freely.					
9. It is possible to enjoy sex with a person and not like that person very much.					
10. It is okay for sex to be just good physical release.					
11. Birth control is part of responsible sexuality.					
12. A woman should share responsibility for birth control.					
13. A man should share responsibility for birth control.					
14. Sex is the closest form of communication between two people.					
15. A sexual encounter between two people deeply in love is the ultimate human interaction.					
16. At its best, sex seems to be the merging of two souls.					
17. Sex is a very important part of life.					

18. Sex is usually an intensive, almost overwhelming experience.					
19. Sex is best when you let yourself go and focus on your own pleasure.					
20. Sex is primarily the taking of pleasure from another person.					
21. The main purpose of sex is to enjoy oneself.					
22. Sex is primarily physical.					
23. Sex is primarily a bodily function, like eating.					

This part of the survey uses a table of questions, view as separate questions instead?

55. Using the 5-point scale below, indicate the number that best describes how frequently you've had the following experiences in the past year.

	Never	Rarely	Occasionally	Frequently	Almost always
1. How often have you whistled at someone while she/he was walking down a street?					
2. How often have you stared at someone's breasts/chest when you are talking to them?					
3. How often have you evaluated someone's physical appearance?					
4. How often have you stared at someone's body?					
5. How often have you leered at someone's body?					

6. How often have you made a rude, sexual remark about someone's body?					
7. How often have honked at someone when she/he was walking down the street?					
8. How often have you stared at one or more of someone's body parts?					
9. How often have you made inappropriate sexual comments about someone's body?					
10. How often have you gazed at someone's body or a body part, instead of listening to what she/he was saying?					
11. How often have you made sexual comments or innuendos when noticing someone's body?					
12. How often have you touched or fondled someone against her/his will?					
13. How often have you perpetrated sexual harassment (on the job, in school, etc.)?					
14. How often have you grabbed or pinched someone's private body areas against her/his will?					
15. How often have you made a degrading sexual gesture towards someone?					

Your feedback

Please make sure you press 'finish' at the bottom of this page to save your survey answers
Please note, we may use quotes from your answers on this page in the write up of this research. The quotes will remain anonymous.

56. What advice would you give to other young people about viewing pornography?

This part of the survey uses a table of questions, view as separate questions instead?

57.

	Not okay - upsetting/distressing	A bit unpleasant	Unsure	Okay - no problems	Good - interesting/enjoyable
How did you find completing these questionnaires?					

This part of the survey uses a table of questions, view as separate questions instead?

58. How distressing/upsetting did you find it to complete these questionnaires?
Please don't select more than 1 answer(s) per row.

	1	2	3	4	5	
Not at all						Very

59. Would you consider taking part in a study like this again in future if you were asked?
Yes
No
Don't know

60. Is there any other feedback you would like to give about this study?

Appendix AA (MRP): Information and consent sheet for online participants

Page 1: Study information

Exploring the Impact of Pornography on Young People
This research project is about young people's use of pornography (or 'porn'). By pornography, we mean images and films of people having sex or behaving sexually. This includes semi-naked and naked images and films of people.

Research shows that many young people look for or see pornography, particularly online. Some young people find pornography helpful or enjoyable, but other young people find it upsetting and it can affect how they feel and behave. We want to understand why different people have different reactions. We would therefore be very grateful if you would take part in this project.

We would like to hear from people who haven't looked at pornography as well as those who have, so even if you haven't looked at pornography, your answers will be very helpful.
Who can take part in this study?

Anyone who:

- Is 16-21 years old;
- Lives in the UK on a permanent basis;
- Is a fluent English speaker;
- Is not involved in an on-going court case regarding their sexual behaviour.

What will this involve?
You will complete a series of online questionnaires. These questionnaires will ask for some information about you and your background (but it will not be possible to identify who you are), your use of pornography (if you have looked at it before), your opinions, and your behaviour. These questionnaires should take between 15 and 45 minutes to complete, depending on your answers. **Your answers will be kept completely anonymous and everyone's answers will be looked at all together. This means that no-one (not even the researchers) will know which answers you give.** You will not be asked to give your name or any identifying personal details at any point in the study, and the online survey system does not record any information about the computers used to complete the survey.

All of the information we collect will be kept in a password-protected file which only the researchers can access. This will be kept for 10 years to comply with the British Psychological Society's research guidelines, and will then be destroyed.

We regret that we are unable to offer payment for taking part, but we really value your participation and your answers will help us to answer some important questions about the effects of pornography.

What will this information be used for?

The information from this project will be used to write a report about the effects of pornography. The report will look at everyone's responses together. This report will be submitted to the University of Bath as part of the lead researcher, Hannah Shilling's research portfolio for her Doctorate degree in Clinical Psychology. This report may also be published in a psychology journal. The report will look at both young people in general and young people who have received specialist support for their sexual behaviour. We hope this report will help other professionals learn about the effects of online pornography, and help them think about how to reduce any negative effects that pornography might have. A short report will also be written for any schools/colleges that take part, to help them think about what they teach young people about online pornography.

What do I need to do next?
If you are happy to take part, please press 'next' at the bottom of this page.
You can change your mind about taking part at any point, without giving a reason. You can also choose to skip any questions that you are unhappy to answer.

If you decide at a later date that you would like your answers to be removed from this study, you can ask to have them removed at any point up until 20th May 2017. To do this you will need to

contact the lead researcher, Hannah Shilling, and provide her with the unique personal password that you will choose when completing the questionnaires. You can contact Hannah by:

- Email at h.shilling@bath.ac.uk – please ensure you use an anonymous email address, i.e. one that does not contain your name;
- Telephone, by calling the Department of Clinical Psychology at the University of Bath on 01225 385506 – please ask for your message to be emailed to Hannah Shilling.
- Post, by writing to Hannah Shilling c/o Clinical Psychology Department, 10W University of Bath, Claverton Down, Bath, BA2 7AY.

Please remember **not** to include your name or personal details should you wish for your data to be withdrawn; we require only your personal study password.

What if I want to know more?

If you have any questions or queries, please feel free to contact the lead researcher directly by email at h.shilling@bath.ac.uk, or you can contact the project supervisor, Dr Catherine Hamilton-Giachritsis, at C.Hamilton-Giachritsis@bath.ac.uk.

Thank you for taking the time to read this.

Yours sincerely,

Hannah Shilling, Clinical Psychologist in Training, University of Bath

Supervised by Dr Catherine Hamilton-Giachritsis and Dr Elly Hanson.

This project has received ethical approval from the University of Bath Psychology Ethics Committee (psychology-ethics@bath.ac.uk) – Reference number -16-224

Page 2

Once this study is complete, we will be writing a report of the overall group results. If you would like to receive a summary copy of these results, please provide your email address below.

Please note, on the next page you will find a link which opens the research questionnaires in a separate window. This means that the email address you give us here will not be linked to your questionnaire answers in any way.

[Page 1 of New Window]

Introduction

Thank you for agreeing to take part in this study.
You will now be given a series of questions to complete. These questions will ask for some information about you and your background (to help us analyse the answers from this study, not to identify who you are), your use of pornography (if you have used it before), your behaviour, and your feelings and opinions about different things.

These questionnaires should take between 15 and 45 minutes to complete, depending on your answers.

Your answers will be kept completely anonymous and everyone's answers will be looked at all together. This means that no-one (not even the researchers) will know which answers you give.

All answers will be kept confidential. However, if in your answers or in any contact with the researchers you tell them something which suggests that you or other people may be at risk, then the researchers may have to tell someone about this. To avoid this happening, **only answer what**

the question is asking. Please think very carefully before you choose to tell the researchers any more information than the questions are asking for.

The answers that you give are really important in helping us understand the different effects that pornography can have on different people. **Please be honest when answering all of the questions.**

Many of the questions you will be asked to answer will be of a personal and sensitive nature. You can miss any questions that you are unhappy to answer, apart from a small number of questions which are needed to help us analyse everyone's answers. However, it will be of great help to the research if you can answer as many questions as you feel able to. At the end of the questions, you will receive information about services you can access if you feel distressed or concerned in any way related to the topics of this research.

If you decide that you want to stop taking part at any time then you are free to do so.

1.Would you like to continue to take part in this study?

Yes
No

Appendix AB (MRP): Screening questions

About you

5.How old are you? *Required*

11 or younger
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30 or older

About you

6.Do you live in the UK on a permanent basis? *Required*

Yes
No

About you

7.Are you a fluent English speaker? *Required*

Yes
No

About you

8.Are you involved in an on-going court case related to your sexual behaviour? *Required*

Yes
No

Appendix AC (MRP): Debrief form

Thank you!

Thank you for taking part in this study. The answers you have given will be looked at along with the answers of everyone else that has taken part and the outcomes will be reported based on all of the answers together, not for individuals. We hope these answers will help us to get a better understanding of why looking at online pornography can be okay for some young people and cause difficulties for others. We will write a report about this to be published in a psychology journal. We hope this report will help people think about ways to reduce any harmful effects of pornography.

We hope you have found it interesting to take part in this study and are very grateful for your time.

If you decide at a later date that you would like your answers to be removed from this study, you can ask to have them removed at any point up until 20th May 2017. To do this you will need to contact the lead researcher, Hannah Shilling, and provide her with the unique personal password that you chose at the start of the questionnaires. You can contact Hannah by:

- Email at h.shilling@bath.ac.uk – please ensure you use an anonymous email address, i.e. one that does not contain your name;
- Telephone, by calling the Department of Clinical Psychology at the University of Bath on 01225 385506 – please ask for your message to be emailed to Hannah Shilling;
- Post, by writing to Hannah Shilling c/o Clinical Psychology Department, 10W University of Bath, Claverton Down, Bath, BA2 7AY.

Please remember **not** to include your name or personal details should you wish for your data to be withdrawn; we require only your personal study password.

We understand that some of the questions you were asked to answer were about sensitive topics. We hope you did not find these questions distressing, but if you did then it is important that you talk to someone about it. You could talk to a friend or an adult that you can trust – this might be a family member, friend, a teacher/member of staff at school/college, your GP, or a professional at any health/social care or support service you might be involved with.

If you don't feel like you can talk to any of these people about what is troubling you, here are some other useful contacts:

If you are worried about your own sexual behaviour:
Be Safe – Be Safe is a multi-agency partnership service working with children and young people with problematic/harmful sexual behaviour in Bristol.
http://cchp.nhs.uk/cchp/explore-cchp/be-safe Tel: 0117 3408700

Lucy Faithfull Foundation – The Lucy Faithfull Foundation works with families that have been affected by sexual abuse including: adult male and female sexual abusers; young people with inappropriate sexual behaviours; victims of abuse and other family members. They can offer confidential information and advice.
http://www.lucyfaithfull.org.uk Tel: 0808 1000 900 help@stopitnow.org.uk. www.stopitnow.org.uk

If you feel distressed and would like some emotional support:
Childline – Childline is a free, private and confidential service that can talk to you about a wide range of issues and provide information and advice. Childline is open to anyone under 19 and is available any time, day or night.
www.childline.org.uk Tel: 0800 1111 see website for email chat

Samaritans – The Samaritans are available to talk to any time you like about whatever you're going through, 24 hours a day, 365 days a year. Calls are free.
www.samaritans.org Tel. 116 123 jo@samaritans.org

SupportLine –SupportLine offers confidential emotional telephone support to men, women, children and young adults throughout the UK on any issue.
www.supportline.org.uk Tel: 01708 765200 info@supportline.org.uk

Research related questions or concerns:
If you have any questions about the study or wish to make a complaint about it, you can contact the researchers:
Hannah Shilling h.shilling@bath.ac.uk
Dr Catherine Hamilton-Giachritsis C.Hamilton-Giachritsis@bath.ac.uk

Appendix AD (MRP): Consent to be contacted form for HSB service participants

Department of Psychology | UNIVERSITY OF BATH

Consent to be Contacted

By completing this form, I agree that (please tick ✓):

☐ I have been spoken to about a research project looking at young people's use of pornography and its effects, and given an information sheet about the project;

☐ I have been given a parent/carer information sheet to give to my parent/carer about this project, if I would like to;

☐ I know my social worker will receive a copy of the information sheet about this project;

AND

☐ I agree to be contacted by Hannah Shilling, the lead researcher for this project, to discuss the project further and decide whether I would like to take part.

Please indicate whether you are:

☐ A young person completing this form for yourself;

OR

☐ A clinician completing this form on behalf of a young person, with their agreement.

If you are a clinician, please complete:

Your name: _____

Reason for completing this on the young person's behalf:

_____

Young person's details:

Name: _____

Date of Birth: _____

Please note, you must be 16 or older to take part in this project.

Contact telephone number: _____

Service who gave you this form: _____

Signature: _____

Date: _____

Once completed, please return this form to XXXX. They will pass your information on to Hannah Shilling, the lead researcher for this project, who will contact you directly about this study.

If you wish to contact Hannah, you can email her at: *hs692@bath.ac.uk*

Project supervisor: Catherine Hamilton-Giachritsis, C.Hamilton-Giachritsis@bath.ac.uk

This project has received ethical approval from The University of Bath Department of Psychology Ethics Committee – Reference 16-224

Appendix AE (MRP): Information form and consent form for HSB service participants

Exploring Young People's Use of Pornography

Dear

My name is Hannah Shilling and I am Clinical Psychologist in Training at the University of Bath. I am working on a research project about young people's use of pornography (or 'porn'), supervised by Dr Catherine Hamilton-Giachritsis (Clinical Psychologist) and Dr Elly Hanson (Clinical Psychologist).

By pornography, we mean images and films of people having sex or behaving sexually. This includes semi-naked and naked images and films of people.

Research shows that many young people look for or see pornography online. Some young people find pornography helpful or enjoyable, but other young people might find it upsetting and it can affect how they feel and behave. We want to understand why different people have different reactions. We would therefore be very grateful if you would take part in this project.

We would like to hear from people who haven't looked at pornography as well as those who have, so even if you haven't looked at pornography, your answers will be very helpful.

Who can take part in this study?

Anyone who:

- Is 16-21 years old;
- Lives in the UK on a permanent basis;
- Is a fluent English speaker;
- Is not involved in an on-going court case regarding their sexual behaviour.

What would this involve?

You will be asked to complete a series of online questionnaires. These questionnaires will ask for some information about you and your background (but it will not be possible to identify who you are), your use of pornography (if you have looked at it before), your opinions, and your behaviour. These questionnaires should take between 15 and 45 minutes to complete, depending on your answers. **Your answers will be kept completely anonymous and everyone's answers will be looked at all together. This means that no-one (not even the researchers) will know which answers you give. We will not give your parents/carers any feedback about you taking part in this study. However, we do suggest that you talk with them about your decision to take part, and you might like to give them a copy of the parent/carer information sheet so they know a bit about the study. Your allocated social worker will receive a copy of this information sheet, but will not receive any further information from the researchers about your participation or your answers.** You will not be asked to give your name or any identifying personal details at any point in the study, and the online survey system does not record any information about the computers used to complete the survey.

All of the information we collect will be kept in a password-protected file which only the researchers can access. This will be kept for 10 years to comply with the British Psychological Society's research guidelines, and will then be destroyed.

At the end of the questionnaires you will have the opportunity to sign up to receive a £5 voucher to thank you for your time. We will need your contact details to send you your voucher. You will be asked to provide these separately to your questionnaire answers, so your personal details are not linked to your questionnaire responses in any way.

What will this information be used for?

The information from this project will be used to write a report about the effects of pornography. The report will look at everyone's responses together. This report will be submitted to the University of Bath as part of the lead researcher, Hannah Shilling's research portfolio for her Doctorate degree in Clinical Psychology. This report may also be published in a psychology journal. The report will look at both young people in the community/education and young people who have received specialist support for their sexual behaviour. We hope this report will help other professionals learn about the effects of online pornography, and help them think about how to reduce any negative effects that pornography might have.

What do I need to do next?

Please fill in the attached form to let me know whether you are willing for the lead researcher, Hannah Shilling, to contact you about this project. I will then arrange a time to meet with you at XXXX (in the presence of a qualified member of staff from the service) so you can complete the questionnaires.

Whether you choose to take part in this research or not, it will not affect the support you receive from XXXX in any way.

If you choose to take part, you can change your mind at any time, without giving a reason. You can also choose to skip any questions that you are unhappy to answer.

If you decide at a later date that you would like your answers to be removed from this study, you can ask to have them removed at any point up until 20th April 2017. To do this you will need to contact the lead researcher, Hannah Shilling, and provide her with the unique personal password that you will choose when completing the questionnaires. You can contact Hannah by:

- Email at hs692@bath.ac.uk – please ensure you use an anonymous email address, i.e. one that does not contain your name;
- Telephone, by calling the Department of Clinical Psychology at the University of Bath on 01225 385506 – please ask for your message to be emailed to Hannah Shilling.
- Post, by writing to Hannah Shilling c/o Clinical Psychology Department, 10W University of Bath, Claverton Down, Bath, BA2 7AY.

Please remember **not** to include your name or personal details should you wish for your data to be withdrawn; we require only your personal study password.

What if I want to know more?

If you have any questions or queries, please feel free to contact me directly by email at hs692@bath.ac.uk, or you can contact my supervisor, Dr Catherine Hamilton-Giachritsis, at C.Hamilton-Giachritsis@bath.ac.uk.

Yours sincerely,

Hannah Shilling, Clinical Psychologist in Training, University of Bath
Supervised by Dr Catherine Hamilton-Giachritsis and Dr Elly Hanson.

This project has received ethical approval from The University of Bath Department of Psychology Ethics Committee – Reference 16-224

Department of Psychology | UNIVERSITY OF BATH

Consent to be Contacted

By completing this form, I agree that (please tick ✓):

☐ I have been spoken to about a research project looking at young people's use of pornography and its effects, and given an information sheet about the project;

☐ I have been given a parent/carer information sheet to give to my parent/carer about this project, if I would like to;

☐ I know my social worker will receive a copy of the information sheet about this project;

AND

☐ I agree to be contacted by Hannah Shilling, the lead researcher for this project, to discuss the project further and decide whether I would like to take part.

Please indicate whether you are:

☐ A young person completing this form for yourself;

OR

☐ A clinician completing this form on behalf of a young person, with their agreement.

If you are a clinician, please complete:

Your name: _____

Reason for completing this on the young person's behalf:

_____

Young person's details:

Name: _____

Date of Birth: _____

Please note, you must be 16 or older to take part in this project.

Contact telephone number: _____

Service who gave you this form: _____

Signature: _____

Date: _____

Once completed, please return this form to XXXX. They will pass your information on to Hannah Shilling, the lead researcher for this project, who will contact you directly about this study.

If you wish to contact Hannah, you can email her at: *hs692@bath.ac.uk*

Project supervisor: Catherine Hamilton-Giachritsis, C.Hamilton-Giachritsis@bath.ac.uk

This project has received ethical approval from The University of Bath Department of Psychology Ethics Committee – Reference 16-224

Appendix AF (MRP): Full data – Associations between demographics and pornography

	Non-pornography sample n = 19 (15.3%) Number (%) *unless otherwise stated*	Pornography sample N = 105 (84.7%) Number (%) *unless otherwise stated*	**All participants n=124 *unless otherwise stated***	Statistics			
				Chi-square (χ^2) or Mann-Whitney U (*U*)	*df*	*p*	Effect size Cramer's *V* (*V*) or Point biserial correlation coefficient (r_{pb})
Age							
Mean (SD)	17.68 yrs (1.77)	17.99 yrs (1.75)	**17.94 yrs (1.75)**	-	-	.485	r_{pb} = .063
Gender (n = 123)				χ^2 = 3.91	2	.143	*V* = .178
Male	6 (31.6%)	58 (55.8%)	**64 (52%)**				
Female	12 (63.2%)	41 (39.4%)	**53 (43.1%)**				
Other	1 (5.3%)	5 (4.8%)	**6 (4.9%)**				
Difference between self- and parent-defined gender (n = 121)				χ^2 = 3.91†	1	1.00	*V* = .006
No	18 (94.7%)	97 (95.1%)	**115 (95%)**				
Yes	1 (5.4%)	5 (4.9%)	**6 (5%)**				
Sexual orientation				χ^2 = 8.45†	3	.025*	*V* = .231
Bisexual	0 (0%)	28 (36.7%)	**28 (22.6%)**				
Heterosexual/straight	16 (84.2%)	65 (61.9%)	**81 (65.3%)**				
Gay/lesbian	1 (5.3%)	5 (4.8%)	**6 (4.8%)**				
Other	2 (10.5%)	7 (6.7%)	**9 (7.3%)**				
Ethnicity				χ^2 = 0.002†	1	1.00	*V* = .004
White-British	16 (84.2%)	88 (83.8%)	**104 (83.9%)**				
Other	3 (15.8%)	17 (16.2%)	**20 (16.1%)**				
Parental/carer education							
1st carer				χ^2 = 0.49†	2	.916	*V* = .030
Didn't finish secondary school	1 (5.3%)	4 (3.8%)	**5 (4%)**				
Finished secondary school	8 (42.1%)	47 (44.8%)	**55 (44.4%)**				
University/higher education	10 (52.6%)	54 (51.4%)	**64 (51.6%)**				
2nd carer				χ^2 = 1.61	2	.479	*V* = .114
Didn't finish secondary school	1 (5.3%)	6 (5.7%)	**7 (5.6%)**				
Finished secondary school	6 (31.6%)	49 (46.7%)	**55 (44.4%)**				
University/higher education	12 (63.2%)	50 (47.6%)	**62 (50%)**				
Type of school (n = 122)				χ^2 = 2.51†	3	.446	*V* = .162
Academy	3 (15.8%)	23 (22.3%)	**26 (21.3%)**				
Private	6 (31.6%)	17 (16.5%)	**23 (18.9%)**				
State	10 (52.6%)	58 (56.3%)	**68 (55.7%)**				
Other	0 (0%)	5 (4.9%)	**5 (4.1%)**				
Level of learning support (n = 123)				χ^2 = 0.54†	1	.492	*V* = .066
Mainstream	15 (78.9%)	89 (85.6%)	**104 (84.6%)**				
Additional/specialist	4 (21.1%)	15 (14.4%)	**19 (15.4%)**				
Amount school taught about staying safe online				χ^2 = 1.17†	2	.629	*V* = .099
Nothing/a small amount	4 (21.1%)	21 (20%)	**25 (20.2%)**				
Moderate amount	3 (15.8%)	29 (27.6%)	**32 (25.8%)**				
A large amount	12 (63.2%)	55 (52.4%)	**67 (54%)**				
School teaching about online pornography (n = 117)				χ^2 = 4.59	1	.046*	*V* = .198
No	8 (47.1%)	73 (73%)	**81 (69.2%)**				
Yes	9 (52.9%)	27 (27%)	**36 (30.8%)**				
Amount parents taught about staying safe online (n = 123)				χ^2 = 2.72	2	.241	.149
Nothing/a small amount	5 (26.3%)	46 (44.2%)	**51 (41.5%)**				
Moderate amount	7 (36.8%)	23 (22.1%)	**30 (24.4%)**				
A large amount	7 (36.8%)	35 (33.7%)	**42 (34.1%)**				
Parental teaching about online pornography (n = 116)				χ^2 = 4.21†	1	.071	.190

	Non-pornography sample n = 19 (15.3%) Number (%) *unless otherwise stated*	Pornography sample N = 105 (84.7%) Number (%) *unless otherwise stated*	**All participants n=124 *unless otherwise stated***	Statistics			
				Chi-square (χ^2) or Mann-Whitney U (U)	*df*	*p*	Effect size Cramer's V (V) or Point biserial correlation coefficient (r_{pb})
No	9 (52.9%)	76 (76.8%)	**85 (73.3%)**				
Yes	8 (47.1%)	23 (23.2%)	**31 (26.7%)**				
Amount parents monitor/restrict internet use							
Not at all/a small amount	10 (52.6%)	77 (73.3%)	**87 (70.2%)**	$\chi^2 = 4.70^{\dagger}$	2	.088	.198
Moderate amount	4 (21.1%)	18 (17.1%)	**22 (17.7%)**				
A large amount	5 (26.3%)	10 (9.5%)	**15 (12.1%)**				
How open/honest with parents about online activity (n = 123)				$\chi^2 = 15.26^{\dagger}$	2	<.001*	.362
Not at all	3 (15.8%)	61 (58.7%)	**62 (52%)**				
Moderately	5 (26.3%)	24 (23.1%)	**29 (23.6%)**				
Completely	11 (57.9%)	19 (18.3%)	**30 (24.4%)**				
Maltreatment total							
Mean (SD)	11.32 (4.74)	12.81 (5.75)	**12.58 (5.62)**	$U = 825.5$	-	.226	-
Subject to HSB from others							
No	16 (84.2%)	61 (58.1%)	**77 (62.1%)**	$\chi^2 = 4.66$	1	.039*	.194
Yes	3 (15.8%)	44 (41.9%)	**47 (37.9%)**				
Previous involvement in fights				$\chi^2 = 2.67$	1	.134	.147
No	12 (63.2%)	45 (42.9%)	**57 (46%)**				
Yes	7 (36.8%)	60 (57.1%)	**67 (54%)**				
Availability of supportive figure when needed (n = 122)				$\chi^2 = 0.52^{\dagger}$	2	.789	.059
Never/once	4 (21.1%)	17 (16.5%)	**21 (17.2%)**				
Sometimes	4 (21.1%)	28 (27.2%)	**32 (26.2%)**				
Often/always	11 (57.9%)	58 (56.3%)	**69 (56.6%)**				

SD = standard deviation, DNA = did not answer

† Fisher's exact probability used as more than 20% of cells had an expected count <5

** significant at p = .05*

Appendix AG (MRP): Full data – Associations between demographics and HSB

	Non-HSB sample n=93, 75% Number (%) *unless otherwise stated*	HSB sample n=31, 25% Number (%) *unless otherwise stated*	**All participants n=124 *unless otherwise stated***	Statistics			
				Chi-square (χ^2) or Mann-Whitney U (U)	*df*	*p*	Effect size Cramer's V (V) or Point biserial correlation coefficient (r_{pb})
Age							
Mean (SD)	17.90 yrs (1.87)	18.06 yrs (1.37)	**17.94 yrs (1.75)**	U = 1258.5	-	.280	-
Gender (n = 123)				χ^2 = 15.49†	2	<.001 *	V = .359
Male	39 (41.9%)	25 (83.3%)	**64 (51.6%)**				
Female	48 (51.6%)	5 (16.7%)	**53 (42.7%)**				
Other	6 (6.5%)	0 (0%)	**6 (4.8%)**				
Difference between self- and parent-defined gender (n = 123)				χ^2 = 2.08†	1	.334	V = .131
No	85 (93.4%)	30 (100%)	**115 (95%)**				
Yes	6 (6.6%)	0 (0%)	**6 (5%)**				
Sexual orientation				χ^2 = 2.90†	3	.396	V = .159
Bisexual	22 (23.7%)	6 (19.4%)	**28 (22.6%)**				
Heterosexual/straight	60 (64.5%)	21 (67.7%)	**81 (65.3%)**				
Gay/lesbian	3 (3.2%)	3 (9.7%)	**6 (4.8%)**				
Other	8 (8.6%)	1 (3.2%)	**9 (7.3%)**				
Ethnicity				χ^2 = 0.32	1	.779	V = .051
White-British	77 (82.8%)	27 (87.1%)	**104 (83.9%)**				
Other	16 (17.2%)	4 (12.9%)	**20 (16.1%)**				
Parental/carer education							
1st carer				χ^2 = 2.16†	2	.301	V = .148
Didn't finish secondary school	5 (5.4%)	0 (0%)	**5 (4%)**				
Finished secondary school	43 (46.2%)	12 (38.7%)	**55 (44.4%)**				
University/higher education	45 (48.4%)	19 (61.3%)	**64 (51.6%)**				
2nd carer				χ^2 = 0.60†	2	.752	V = .131
Didn't finish secondary school	6 (6.5%)	1 (3.2%)	**7 (5.6%)**				
Finished secondary school	40 (43%)	15 (48.4%)	**55 (44.4%)**				
University/higher education	47 (50.5%)	15 (38.4%)	**62 (50%)**				
Type of school (n = 122)				χ^2 = 2.53†	3	.472	V = .131
Academy	18 (19.8%)	8 (25.8%)	**26 (21.3%)**				
Private	16 (17.6%)	7 (22.6%)	**23 (18.9%)**				
State	54 (59.3%)	14 (45.2%)	**68 (55.7%)**				
Other	3 (3.3%)	2 (6.5%)	**5 (4.1%)**				
Level of learning support (n = 123)				χ^2 = 6.43†	1	.019*	V = .229
Mainstream	83 (89.2%)	21 (70%)	**104 (83.9%)**				
Additional/specialist	10 (10.8%)	9 (30%)	**19 (15.3%)**				
Amount school taught about staying safe online				χ^2 = 3.86	2	.163	V = .176
Nothing/a small amount	22 (23.7%)	3 (9.7%)	**25 (20.2%)**				
Moderate amount	25 (26.9%)	7 (22.6%)	**32 (25.8%)**				
A large amount	46 (49.5%)	21 (67.7%)	**67 (54%)**				
School teaching about online pornography (n = 117)				χ^2 = 2.47	1	.172	V =.145
No	63 (63.3%)	18 (58.1%)	**81 (69.2%)**				
Yes	23 (26.7%)	13 (41.9%)	**36 (30.8%)**				
Amount parents taught about staying safe online (n = 123)				χ^2 = 2.38	2	.321	V =.139
Nothing/a small amount	41 (44.6%)	10 (32.3%)	**51 (41.5%)**				
Moderate amount	23 (25%)	7 (22.6%)	**20 (24.4%)**				
A large amount	28 (30.4%)	14 (45.2%)	**42 (34.1%)**				
Parental teaching about online pornography (n = 116)				χ^2 = 0.66	1	.479	V =.076
No	64 (75.3%)	21 (67.7%)	**85 (73.3%)**				

	Non-HSB sample n=93, 75% Number (%) *unless otherwise stated*	HSB sample n=31, 25% Number (%) *unless otherwise stated*	**All participants n=124 *unless otherwise stated***	Statistics			
				Chi-square (χ^2) or Mann-Whitney U (U)	*df*	*p*	Effect size Cramer's V (V) or Point biserial correlation coefficient (r_{pb})
Yes	21 (24.7%)	10 (32.3%)	**31 (26.7%)**				
Amount parents monitor/restrict internet use							
Not at all/a small amount	72 (77.4%)	15 (48.4%)	**87 (70.2%)**	$\chi^2 = 9.52$	2	.007	V =.277
Moderate amount	13 (14%)	9 (29%)	**22 (17.7%)**				
A large amount	8 (8.6%)	7 (22.6%)	**15 (12.1%)**				
How open/honest with parents about online activity (n = 123)				$\chi^2 = 0.05$	2	1.00	V = .021
Not at all	48 (52.2%)	16 (51.6%)	**64 (52%)**				
Moderately	22 (23.9%)	7 (22.6%)	**29 (23.6%)**				
Completely	22 (23.9%)	8 (25.8%)	**30 (24.4%)**				
Maltreatment total				$U = 951.5$	-	.004*	-
Mean (SD)	11.97 (5.40)	14.42 (5.94)	**12.58 (5.62)**				
Subject to HSB from others				$\chi^2 = 12.41$	1	.001*	V = .317
No	66 (71%)	11 (35.5%)	**77 (62.1%)**				
Yes	27 (29%)	20 (64.5%)	**47 (37.9%)**				
Previous involvement in fights				$\chi^2 = 3.13$	1	.097	V = .159
No	47 (50.5%)	10 (32.3%)	**57 (46%)**				
Yes	46 (49.5%)	21 (67.7%)	**67 (54%)**				
Availability of supportive figure when needed (n = 122)				$\chi^2 = 4.17$	2	.119	V = .185
Never/once	19 (20.4%)	2 (6.5%)	**21 (16.9%)**				
Sometimes	21 (22.6%)	11 (35.5%)	**32 (25.8%)**				
Often/always	51 (54.8%)	18 (58.1%)	**69 (55.6%)**				

SD = standard deviation, DNA = did not answer

† Fisher's exact probability used as more than 20% of cells had an expected count <5

** significant at p = .05*

Appendix AH (MRP): Full data – Features of pornography use and HSB

	Non-HSB sample n=76, 72.4% Number (%) *unless otherwise stated*	HSB sample n=29, 27.6% Number (%) *unless otherwise stated*	**All participants who watched pornography (n=105) Number (%) *unless otherwise stated***	Statistics: Chi-square (χ^2) or Mann-Whitney U (U)	*df*	*p*	Effect size Cramer's V (V) or Point biserial correlation (r_{pb})
Age first viewed pornography (n = 105)							
Mean (SD)	13.29 yrs (2.44)	13.76 yrs (2.46)	**13.42 yrs (2.45)**	U = 9.44	-	.253	-
Mode	12	15	**15**				
Range	7-19	7-19	**7-19**				
Frequency of viewing pornography (n = 104)				χ^2 = 7.68	3	.049*	V = .284
Monthly or less	14 (18.7%)	2 (6.9%)	**16 (15.4%)**				
Weekly or fortnightly	12 (16%)	4 (13.8%)	**16 (15.4%)**				
Multiple times per week	37 (49.3%)	11 (37.9%)	**48 (46.2%)**				
Daily or more	12 (16%)	12 (41.4%)	**24 (23.1%)**				
Average duration of viewing (n = 104)				χ^2 = 3.72	2	.141	V = .189
<15 mins	36 (48%)	8 (27.6%)	**44 (42.3%)**				
15-30mins	30 (40%)	17 (58.6%)	**47 (45.2%)**				
30mins+	9 (12%)	4 (13.8%)	**13 (12.5%)**				
Personal importance of pornography (n = 104)				χ^2 = 15.34	2	< .001*	V = .384
Not important	46 (61.3%)	7 (24.1%)	**53 (51%)**				
Neutral	15 (20%)	6 (20.7%)	**21 (20.2%)**				
Important	14 (18.7%)	16 (55.2%)	**30 (28.8%)**				
Extent to which pornography represents personal ideal of sex				χ^2 = 6.25	2	.050*	V = .244
Not representative	33 (43.4%)	8 (27.6%)	**41 (39%)**				
Neutral	21 (27.6%)	5 (17.2%)	**26 (24.8%)**				
Representative	22 (28.9%)	16 (55.2%)	**38 (36.2%)**				
Main format of viewing pornography (n = 104)							
DVDs	0 (0%)	1 (3.6%)	**1 (1%)**				
Magazines	0 (0%)	2 (7.1%)	**2 (1.9%)**				
Newspapers	0 (0%)	0 (0%)	**98 (94.2%)**				
Online	73 (96.1%)	25 (89.3%)					
Television	3 (3.9%)	0 (0%)	**3 (2.9%)**				
Other formats in which have viewed pornography (n = 104)							
DVDs	9 (12%)	13 (44.8%)	**22 (21.2%)**				
Magazines	22 (29.3%)	13 (44.8%)	**35 (33.7%)**				
Newspapers	9 (12%)	7 (24.1%)	**16 (15.4%)**				
Online	73 (97.3%)	29 (100%)	**102 (98.1%)**				

Television	22 (29.3%)	12 (41.4%)	**34 (32.7%)**
Other – friend homemade	0 (0%)	1 (3.4%)	**1 (1%)**
How find porn (n = 103)			
For self	69 (92%)	28 (100%)	**97 (94.2%)**
Shown by friends	17 (22.7%)	15 (53.6%)	**32 (31.1%)**
Shown by family	0 (0%)	2 (7.1%)	**2 (1.9%)**
Find it by accident	23 (30.7%)	5 (17.9%)	**28 (27.2%)**
Other – shown by abusers	1 (1.3%)	0 (0%)	**1 (1%)**
Devices used to access porn online (n = 102)			
Personal device	73 (98.6%)	26 (92.9)	**99 (97.1%)**
Family device	12 (16.2%)	14 (50%)	**26 (25.5%)**
Friend's device	4 (5.4%)	10 (35.7%)	**14 (13.7%)**
School device	0 (0%)	0 (0%)	**0 (0%)**
Public device	1 (1.4%)	0 (0%)	**1 (1%)**
Reasons for viewing (n = 102)			
Curiosity	47 (63.5%)	19 (67.9%)	**66 (64.7%)**
Sexual excitement	63 (85.1%)	27 (96.4%)	**90 (88.2%)**
For information about sex	20 (27%)	7 (25%)	**27 (26.5%)**
With friends and they wanted to	4 (5.4%)	7 (25%)	**11 (10.8%)**
For a laugh	8 (10.8%)	0 (0%)	**8 (7.8%)**
Just pops up when doing something	6 (8.1%)	1 (3.6%)	**7 (6.9%)**
Other - testing self to see if could handle it	1 (1.4%)	0 (0%)	**1 (1%)**

† where Fisher's exact probability was used as more than 20% of cells had an expected count <5
SD = standard deviation, DNA = did not answer

Appendix AI (MRP): Full details – Mediational analysis (pornography & HSB)

Associations were explored between the proposed mediators and viewing pornography (predictor) and HSB (outcome). Both sexual attitudes (r_{pb} = .46, p < .001, when two outliers were excluded to meet parametric assumptions) and sexual objectification (Mann Whitney U = 457.5, p < .001, r = .337) were highly significantly correlated with viewing pornography. Both factors were also significantly correlated with HSB (sexual attitudes: r_{pb} = .249, p = .006; sexual objectification U = 716, p = < .001, r = .376).

Mediational models were therefore run with viewing pornography as the predictor, HSB as the outcome, and sexual attitudes and sexual objectification as mediators.

In the mediation model for sexual attitudes, viewing pornography remained significantly associated with sexual attitudes [coeff = 1.03, SE = .14, p < .001, 95% CI (0.746, 1.311)]. Sexual attitudes remained significantly associated with HSB [coeff = 1.00, SE = 0.37, p = .007, 95% CI (0.276, 1.725)], while pornography remained not significantly associated with HSB [coeff = 0.13, SE = 0.87, p = .877, 95% CI -1.588, 1.847)]. Sexual attitudes mediated the association between pornography and HSB [effect = 1.029, bootstrapped SE = 0.43, 95% CI (0.344, 2.017)].

In the mediation model for sexual objectification, viewing pornography remained significantly associated with sexual attitudes [coeff = 0.11, SE = .03, p < .001, 95% CI (0.057, 0.162). Sexual objectification remained significantly associated with HSB [coeff = 7.82, SE = 1.98, p < .001, 95% CI (3.944, 11.694)], while pornography remained not significantly associated with HSB [coeff = 0.38, SE = 0.84, p = .655, 95% CI (-1.275, 2.027)]. Sexual objectification mediated the association between pornography and HSB [effect = 0.855, bootstrapped SE = 0.28, 95% CI (0.403, 1.533)].

Appendix AJ (MRP): Full details – Mediational analysis (AP & HSB)

Associations were explored between the proposed mediators and viewing of AP (predictor). There were no significant associations between any of the emotional response categories and viewing of AP (neutral response: $\chi^2 = 2.94$, df = 1, p = .102, Cramer's V = .176; angry/confused: $\chi^2 = 1.06$, df = 1, p = .442, Cramer's V = .105; aroused/excited: $\chi^2 = 1.67$, df = 1, p = 241, Cramer's V = .132; happy/interested: $\chi^2 = 0.002$, df = 1, p = 1.0, Cramer's V = .004; shame/regret: $\chi^2 = 0.51$, df = 1, p = .540, Cramer's V = .073). Additionally, sexual attitudes were not significantly related to viewing AP ($r_{pb} = .169$, $p = .100$), thus emotional responses and sexual attitudes were excluded from further analysis.

There was a significant relationship between sexual arousal and viewing AP ($\chi^2 = 8.88$, df = 2, $p = .01$, Cramer's V = .304), with a higher proportion of those who watched this form of pornography reporting high levels of sexual arousal compared to those who did not (84.4% vs. 56.9% high arousal; 11.1% vs. 25.5% moderate arousal; 4.4% vs. 17.6% no/low arousal). Sexual arousal was also significantly related to HSB (Fisher's exact $p = .002$, Cramer's V = .332).

Addictiveness to porn ($r_{pb} = 1.0$, $p < .001$) and sexual objectification (Mann Whitney $U = 743.5$, $p = .003$, $r = -.303$) were both significantly correlated with viewing coercive/aggressive/non-consenting pornography; with higher scores on both scales associated with having viewed this form of pornography. Both factors were also significantly correlated with HSB (addictiveness: $r_{pb} = .465$, $p < .001$; sexual objectification: $r_{pb} = .347$, $p = .002$), with higher scores on both scales associated with HSB.

Three mediational models were therefore run with viewing AP (predictor), HSB (outcome) and sexual arousal, addictiveness and sexual objectification as mediators.

Viewing AP remained significantly associated with sexual objectification [coeff = 0.08, SE = .02, $p = .003$, 95% CI (0.028, 0.125)]. Both AP [coeff = 1.28, SE = 0.56, p = .021, 95% CI (0.190, 2.370)] and sexual objectification [coeff = 5.71, SE = 2.27, p = .012, 95% CI (1.258, 10.169)] were significantly associated with HSB. Sexual objectification mediated the association between AP and HSB [effect = 0.436, bootstrapped SE = 0.24, 95% CI (0.106, 1.071)].

For addictiveness, viewing AP remained significantly associated with addictiveness [coeff = 0.90, SE = 0.24, $p < .001$, 95% CI (0.427, 1.366)]. Addictiveness remained

significantly associated with HSB [coeff = 0.98, SE = 0.28, p < .001, 95% CI (0.425, 1.531)], while AP was no longer significantly associated [coeff = 0.96, SE = 0.59, p = .103, 95% CI (-0.196, 2.123)]. Addictiveness mediated the association between AP and HSB [effect = 0.877, bootstrapped SE = 0.41, 95% CI (0.206, 1.818)].

For sexual arousal, viewing AP remained significantly associated with sexual arousal [coeff = 0.41, SE = .13, *p* = .003, 95% CI (0.143, 0.673)]. AP [coeff = 1.32, SE = 0.55, p = .016, 95% CI (0.242, 2.391)] was significantly associated with HSB while sexual arousal was marginally significantly associated [coeff = 1.36, SE = 0.71, p = .054, 95% CI (-0.021, 2.749)]. Sexual arousal mediated the association between AP and HSB [effect = 0.556, bootstrapped SE = 2.92, 95% CI (0.404, 8.726)].